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Louisiana State University and Agricultural and Mechanical College, Ph.D., 1969
Business Administration

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AN ANALYSIS OF THE EFFECTS OF VARIOUS MESSAGE PRESENTATIONS ON COMMUNICATEE RESPONSES

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Management and Marketing

by
John Douglas Pettit, Jr.
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January, 1969

PLEASE NOTE:
Several pages contain colored illustrations. Filmed in the best possible way.
UNIVERSITY MICROFILMS

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ABSTRACT

The objective of this experiment is to examine the relationship between different business messages and communicatee reactions. Specifically, four hypotheses were stated to be tested:

> Hypothesis One: That written communications create images in the minds of receivers to whom messages have been communicated. Specifically, business letters, as a form of written communication, produce such images.
>
> Hypothesis Two: That if accepted principles of business writing are utilized in a given message, favorable images can be created.
>
> Hypothesis Three: That if generally accepted principles of written business communication are not followed, different (less favorable) images result.
>
> Hypothesis Four: That images formed through written messages will change over time as a result of repeated message stimuli.

To establish proof or disproof of these hypotheses, an experiment was devised which involved analyzing the semantic reactions of three groups of subjects who had received various message designs in a planned, systematic sequence.

The rationale for conducting this research was that principles of business writing need empirical verification to qualify specifically as true principles of social science. Investigation of related studies in the business communications area revealed a lack of basic research on this topic. Thus, the time seemed ripe for conducting an experiment to examine the empirical validity of certain principles of business writing.

Design of the experiment used three groups of student respondents at Louisiana State University. Two series of ten letter messages were constructed and administered to the experimental groups in varying fashion. One group received message stimuli structured with accepted principles of business writing; a second group received message units not structured with such principles; and a third group received both types of messages for each communication situation in the series. Additionally, semantic differential tests, a behavioral research technique for measuring concept formation, were administered at the midpoint and end of the experimental period. These semantic responses formed the substance of proof or disproof of the hypotheses. In total, the study lasted for twelve class days and two hundred twenty-five responses were used to prove the four hypotheses.

Results of the experiment provided the following conclusions in each hypothesis:

> Hypothesis One: Because group semantic profiles plotted on varying extremes of the semantic scales used and in diversified dimension patterns, it was concluded that message stimuli did appear to create communicatee images. Moreover, the concepts formed seemed to be directly associated with the type of message received.
>
> Hypothesis Two: Semantic profiles of those groups receiving messages structured with principles of business writing revealed that messages designed with such principles did produce favorable communicatee connotations. Also, a greater degree of positive connotation was noticed when respondents received good and bad messages simultaneously.
>
> Hypothesis Three: Profiles of those groups which received messages not structured with principles of business writing disclosed negative connotations. However, multiplied negative connotations were not found when respondents received both good and bad messages simultaneously.

Hypothesis Four: While an analysis of image formation from the first test period to the second proved that communicatee images did change over time, the pattern of this change was somewhat inconsistent. Profiles in the independent groups became less meaningful over time while profiles of the combination group showed more meaningful judgements on some scales and less meaningful ones on others between test periods. It was concluded that some factor other than the experimental variable created these conditions.

Although this pioneer experiment encourages the empirical validity of certain principles of business writing, additional behavioral research can profitably advance the factual base of the business communications area.

CHAPTER I

INTRODUCTION

The word "communications" has developed broad and narrow meanings over the years. To some people, it implies an encompassing term which explains all forms of human behavior; to others, communication defines a more restrictive viewpoint and conveys the impression of a skill--writing, speaking, listening, or reading. Still to others, communication may denote a combination of these broad and narrow approaches. Thus, communication can mean many things to many people and any study which purports to analyze an aspect of the communication process must first begin with a basic definition of communication. Such a definition will serve as a frame of reference and delimit the scope of research.

Communication as used in context of this dissertation suggests written communication in the form of business letters. This explanation narrows the boundaries of the research somewhat; however, communication through written business letters still implies that communication involves symbolic behavior. Specifically, this research will focus on one aspect of symbolic behavior--communicatee reactions to symbol stimuli in the form of business letter messages.

Regardless of the meaning of communication or level of analysis used, when a student of communications attempts to study this phenomenon, he is confronted with a body of knowledge--facts, generalizations,

and abstractions such as hypotheses, principles, and theories. The area of written business communication is no different for there are facts, hypotheses, and principles embodied in this field to be sure. It is here, however, that confusion exists and those researchers interested in the area enter a semantic jungle when they attempt to distinguish between facts, hypotheses, and principles of written business communication.

At present, it appears from the literature that authorities in the field of written communication have used the terms hypothesis and principle interchangeably, whereas in a scientific sense, a difference does exist. David Flanders defines a principle of social science as:

1. an abstract generalization relating to a relatively universal set of social phenomena.
2. expressible as a proposition having formal truth value.
3. expressible as a quantitative relationship of two or more variables.
4. verifiable in terms of correspondence to the real world.
5. connecting variables that have a causal relationship.[1]

Virtually none of the purported principles of business writing can stand the rigors of this definition. Most of the principles, however, do meet the requirements of relating to a social phenomenon,

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[1]Dwight P. Flanders, Science and Social Science, Stipes Publishing Company, Champaign, Illinois, 1959, pp. 10-11.

containing truth value, and explaining causal relationships; most lack verification and expression as a quantitative relationship.

Thus, a methodological error emerges in the business writing area, for what previously has been known as "principles" are only principles in opinion, not fact. Actually those generalizations mistakenly labelled principles approach what is more properly known as a hypothesis--a hunch or partially developed idea.[2]

The confusion between hypotheses and principles of business writing has impeded the development of the business communication discipline, since the idea of "principles" implies empirical evidence to support the abstractions that have been made. At present, empirical research efforts are sketchy in the business communications area. Thus, the time seems ripe for an inquiry into the validity of certain principles of business writing. Such an exploration will enrich the substantive foundation of the business communication area. The following research is dedicated to fulfilling this objective.

A. Statement of the Hypotheses

The rationale for utilizing principles of business writing in a given letter message is that a message structured according to these principles will elicit a probable response from receivers of such a message. Responses could range from a feeling of euphoria about a company, product, or writer to taking some specific action such as

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[2] Ibid., p. 29.

paying an overdue debt or buying a particular product. Before stating a specific hypothesis regarding principles of business writing, however, it is necessary to formulate first a hypothesis which will predict the interrelationship between communicatee images and written communications in general. Thus, the first hypothesis of this study is:

> Hypothesis One: That written communications create images in the minds of receivers to whom messages have been communicated. Specifically, business letters, as a form of written communication, produce such images.

Should this hypothesis prove untrue, then there can be no justification for studying written communications. To the extent that receivers do not react in any way to message stimuli, then the entire field of business writing is open to question.

Additionally, two supplementary hypotheses stem from the major premise. These hypotheses extend the first supposition and attempt to make the study more specific. They are as follows:

> Hypothesis Two: That if accepted principles of business writing are utilized in a given message, favorable images can be created.

> Hypothesis Three: That if generally accepted principles of written business communication are not followed, different (less favorable) images result.

While Hypothesis One attempts to determine whether or not communicatees react at all to written messages, Hypotheses Two and Three purport to measure the dimension of communicatee reactions to both good and bad messages.[3]

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[3]Good and bad in this context imply that principles of business writing are used or not used in a letter message.

Should the first hypothesis prove true, then the order of these hypotheses would appear correct and logical, and all three of the hypotheses would provide completeness for the research. The reverse of this situation demands further comment, however. If Hypothesis One is incorrect, it would seem that Hypotheses Two and Three would likewise be invalid. When no image results from a written message, then whether accepted principles are used in that message or whether they are not makes little difference. Thus, to prove Hypothesis One true requires further investigation of the succeeding hypotheses. Conversely, to disprove Hypothesis One negates Hypotheses Two and Three and no additional verification is needed.

Current assumptions concerning the validity of the principles of business writing would seem to be correct, assuming that Hypotheses One, Two, and Three prove true. If the hypotheses are rejected, however, current thinking in the field of business writing may need re-evaluation. Nevertheless, a pioneer experiment testing selected principles in the area could provide the impetus for investigating and discovering new principles of written business communication.

This idea shapes the pattern for a fourth hypothesis, designed to complement existing principles of business writing and to increase their content.

> Hypothesis Four: That images formed through written messages will change over time as a result of repeated message stimuli.

Like Hypotheses Two and Three, Hypothesis Four depends upon the validity of Hypothesis One and assumes that written messages create

images in the minds of individuals to whom such messages are directed. Similarly, Hypothesis Four follows logically from Hypotheses Two and Three and attempts to determine the degree to which images vary over time as opposed to studying image formation at one instant in time.

Taken as a whole, the proof or disproof of these four hypotheses should contribute significantly to the business communications discipline, particularly in the complex area of communicatee adaptation. Actually, the four premises are inseparable; yet tangible proof of their correctness is needed if the business communication framework is to build from a solid foundation.

B. Importance of the Study

The purpose of this study, generally, is to answer one basic question: Does it make a difference how written messages are structured? Each of the four hypotheses will help resolve the question partially; together they will generate a more complete answer. Accordingly, results of this research should benefit present and future communicators in improving the effectiveness of their communication efforts.

To say that communicators will benefit if they know the validity of the principles they espouse appears ludicrous. Yet, present communicators face a paradox at this time in the twentieth century. On the one hand, they are concerned with improving a basic form of human behavior--symbol manipulation and control. On the other hand, they lack empirical evidence to support many of the rudiments of

their position. The outcome of this paradox can be resolved, in part, by a detailed inspection of some of the basic hypotheses of human communication.

Not only will this study aid business communicators by substantiating some of the indispensible hypotheses of their position, it will also contribute to a more complete, internally consistent communication theory. "Principles" and "theory" are related terms; however, the linkage between the concepts is not always completely understood. For the purposes of this study, Flanders' distinction between principles and theory is quite appropriate: "The term theory should be reserved for an integrated set of principles. . . . A principle . . . is thus a building block in the edifice of theory."[4] It would seem that validating certain principles of business writing would greatly enhance the integration of these principles into the communication theory structure.

To a great extent, the business communications field keyed its development on a "micro" level. Such courses as Principles of Letter Writing and Principles of Report Writing initiated the business communications movement. Many of these courses have continued until today. A more recent trend in the maturation of the business communication area has been the development of communication theory. From this vantage point, the tenor of many business communications course now seems to be moving toward "macro" communications.

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[4]Flanders, op. cit., p. 12.

At this level of development, significant abstractions, concepts, and theories encircle the various sub-areas of business communications and provide a conceptual framework for unifying the entire discipline. If this trend continues and communication theory becomes an integral part of the business communication discipline, higher level abstractions should progress from a concrete, factual base.[5] To the extent that this study and others can verify the correctness of certain written communication hypotheses, communication theory can develop in a logical sequence--from facts to principles on one level; from an integration of principles to theory on another.

C. Limitations

Surely, a pioneer experiment concerned with analyzing the highly dynamic process of communication can develop some limitations. And these limitations are best acknowledged explicitly before interpreting the results of the study. Basically, the major weaknesses of this research project centralize around the nature of the respondents, the nature of the experimental environment generally, and the time sequence of message stimuli.

Students in the beginning courses of marketing and management at Louisiana State University, Baton Rouge, Louisiana, were used as

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[5]This discussion of theory building assumes that abstractions should be made from empirical evidence. At the same time, it is realized that a priori reasoning could advance some useful theories. While both methodologies are recognized, the author prefers to approach the subject from an empirical standpoint.

subjects in the conduct of this experiment. Since these subjects received training in the business administration area during the course of the study, they could have become a biased group. For instance, the marketing management concept and its focus on the consumer shows strong similarity to the "you viewpoint" approach developed in one set of letter messages. During the various phases of the study, the groups might have become conditioned to feel a certain way about how a business should function. This conditioning could have been reflected in various responses the subjects gave during the experiment.

To assume, also, that undergraduate students will give the same responses as the general public appears naive. Despite this disadvantage, these students did comprise a large group of respondents assembled in an environment conducive to experimentation. Without their cooperation this research could not have been conducted. Thus, the advantage of having a large number of subjects in an atmosphere which allowed experimentation to take place seemed to outweigh the disadvantages associated with using undergraduate respondents.

The general nature of the experimental environment constituted a second major limitation of this research. Experimental conditions in a classroom atmosphere are certainly not the same as the business world. Too, student involvement in the study seemed to be a problem, although every effort was made to create realistic conditions during the study.[6]

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[6]See Chapter Two--Methodology, pp. 35-36.

A final weakness in this study concerned the time factor. Specifically, time as a limiting factor develops two meanings:

1. time regarding the entire duration of the experiment, and

2. time relating to the sequence of letter-message stimuli.

Difficulty arises when trying to assess clearly the "test effect" in this project; yet, its presence is certainly a possibility. The experiment was conducted over a period of twelve consecutive class days (approximately four weeks). During this time, respondents could have experienced fatigue and such experimental exhaustion might have reflected itself in the impressions given in the investigation. At another level of analysis, to assume that communicatees will receive a letter message from a business every other day (three times per week) seems fallacious.

The major drawbacks of this work limit to some degree the conclusions derived from the basic data. Realized explicitly, nevertheless, they will assist an evaluation of the conclusions. Possibly these limitations will constitute areas for additional research in future communications investigation.

D. Significance of Related Studies

A survey of the business writing literature reveals a lack of testing of specific principles in the field. However, close scrutiny of the psychology literature does yield some interesting affiliated studies, particularly in the use of the semantic differential. Whereas previous research efforts were restricted perhaps because vital research

techniques were needed, the development of more refined and sophisticated research methods now make the validation of certain writing principles possible. Thus, the basic functions of this related studies section are to demonstrate and justify the use of the semantic differential in behavioral research and to show that some of the concepts used in written business communications exist under different terms in other social sciences. Moreover, some of these ideas have been submitted to partial empirical testing in related academic areas.

1. The Value of the Semantic Differential in Communications Research

Developed by Osgood and others in 1957[7], the semantic differential has gained prominence as a significant tool of behavioral research since its inception. Generally speaking, the semantic differential measures the psychological meaning of concepts or things at points in semantic space.[8] To completely understand the semantic differential, a knowledge of two cardinal terms--scales and dimensions of semantic space--is essential.

Bipolar adjective scales such as good-bad, fair-unfair, weak-strong, etc., plus the concept to be rated comprise the physical format of a semantic differential. The adjective scales are arranged on a sheet of paper with equal gradients of white space in between each

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[7]See Charles E. Osgood, George J. Suci, and Percy H. Tannenbaum, The Measurement of Meaning, University of Illinois Press, Urbana, Illinois, 1957.

[8]Fred N. Kerlinger, Foundations of Behavioral Research, Holt, Rinehart, and Winston, Inc., New York, 1965, p. 564.

polar pair. When respondents rate a given concept on each selected scale by checking their impressions in degrees on each bipolar continuum, a meaning profile results.

Previous research has indicated that certain adjective scales cluster together to form three primary dimensions of semantic meaning. Osgood refers to these groups of scales (or dimensions of semantic space) as evaluative, potency, and activity. Although these groups are the most important dimensions in semantic differentiation, other groupings have been found to exist. In most research using this technique, however, the evaluative, potency, and activity dimensions receive first priority.

From this brief description of the semantic differential method, it would seem that the potential of this technique in communications research is unlimited. Especially is this true if Lee Thayer's explanation of communication holds merit. He states that communication does not exist. It occurs every time a person assigns meaning to a stimulus.[9] If the semantic differential can provide a quantitative measurement of the meaning attached to a stimulus, then an accurate device for studying the communication process unfolds. The following studies will attempt to show in more detail the usefulness of the semantic differential method.

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[9]Lee O. Thayer, Administrative Communication, Richard D. Irwin, Inc., Homewood, Illinois, 1965, p. 43.

2. Evaluating the Degree of Communication Success

Melvin Manis has applied the semantic differential to a communication incident and his results show strong promise for the use of semantic differentiation in communication situations.[10] Manis' method entailed having communicators write short passages explaining their positions on two concepts. Then the communicators rated the concepts on the semantic differential. The written messages were next distributed to a class of students who read the passages and rated each topic on the semantic differential. Each communicatee tried to predict how the communicators felt about the topics on which they wrote.

This procedure generated two sets of meaning profiles: one for the communicator and another for the communicatee. When compared, the evaluative scales emerged as more highly correlated between the profiles than potency and activity scales. Therefore, results of this study not only reveal the general importance of the semantic differential in analyzing a communication situation, but also indicate that within the various scales, those which evaluate are much more accurate in a prediction than those which measure strength or action.

3. Syntactical Meaning and Personal Identification

In an effort to determine the structural meanings of subject and object positions in active and passive voice sentences, Johnson

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[10]Melvin Manis, "Assessing Communication with the Semantic Differential," American Journal of Psychology, Vol. LXXII, No. 1 (March, 1959), pp. 111-113.

conducted two experiments--one to test the meaning of subjects and objects in active sentences; another to measure the significance of subject and object meaning in active and passive voice constructions.[11] Conclusions of both these studies indicate that subject positions in active voice sentences rate more meaningfully on activity and potency dimensions of the semantic differential when contrasted with object positions in active voice sentences. This conclusion implies that active voice subjects convey more lively and animate meanings.

Subject and object meanings in passive sentences differed also. When noun referents in subject and object positions of passive sentences were rated on the semantic scales, passive subjects received higher activity and potency ratings than passive objects. Overall, however, active subjects and objects received more meaningful ratings than passive ones, which in both experiments tended to be more neutral when rated on the various bipolar scales.

Glixman and Wolf have discovered that when two sets of statements--those potentially relating to an individual (Self) and those relating to dime store objects (Objects)--were rated on a six scale semantic differential, Self statements score more meaningfully than Object items.[12] In addition, many more different meanings were

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[11]Michael G. Johnson, "Syntactic Position and Rated Meaning," Journal of Verbal Learning and Verbal Behavior, Vol. VI, No. 2 (April, 1967), pp. 240-246.

[12]Alfred F. Glixman and John C. Wolfe, "Category Membership and Interitem Semantic-Space Distances," Journal of Personality, Vol. XXXV, No. 1 (March, 1967), pp. 134-143.

associated with potential Self statements when compared to ratings of Object items. Such conclusions as these suggest that respondents quickly identify with statements of a personal nature as opposed to statements of impersonal qualities.

4. Changes in Meaning: Through Age and Through Verbal Satiation

The semantic differential has been employed also to measure changes in the meaning of several concepts between age levels. After having second grade, fourth grade, sixth grade, and college subjects rate seven concepts on a nine scale semantic differential, Maltz inferred that the meaning of a concept apparently changes with age.[13] In older age groups, meaning changes become more apparent and more uniform. As a result, there is a definite relationship between the nature of conceptual processes and maturity.

Furthermore, respondents to a semantic differential test can become verbally satiated; that is, the meaning of a word may change or expire when the word is continuously repeated.[14] Lambert and Jakobovits subjected the idea of verbal satiation to testing and results of their experiment verified the hypothesis.[15] When respondents repeated a word and then rated that word on the semantic differential,

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[13]Howard E. Maltz, "Ontogenetic Change in the Meaning of Concepts as Measured by the Semantic Differential," Child Development, Vol. XXXIV (March, 1963), pp. 667-674.

[14]Wallace E. Lambert and Leon A. Jakobovits, "Verbal Satiation and Changes in the Intensity of Meaning," Journal of Experimental Psychology, Vol. LX, No. 6 (December, 1960), p. 376.

[15]Ibid., pp. 376-383.

ratings moved toward the mid-points or meaningless positions on the adjective scales. Conclusions of this study indicate that repetition of words relates to mental cognition, which may intercede and inhibit the meaning of a concept. However, longer messages using hundreds of word units may yield different results than those reported in this investigation.

5. The Relationship of Emotions and Meaning

Evidence is limited regarding the exact connection between emotions and meaning; nonetheless, studies are being initiated to explore the association between the terms. Foremost among these early studies is a preliminary analysis presented by Plutchik which attempts to investigate intensity levels of eight primary dimensions of emotions.[16]

In this experiment, sixteen subjects rated twenty terms reflecting eight basic measures of emotion. After analyzing the semantic profiles, Plutchik contended that a direct relationship exists between the intensity of an emotional term and the number of extreme judgments made. Hence, more forceful emotions are easier to recognize because of the intense meaning they convey.

6. Implications for Written Communications

Hopefully, these synopses of related studies demonstrate the significance of the semantic differential as a method for appraising

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[16]Robert Plutchik, "Studies of Emotion in the Light of a New Theory," Psychological Report, Vol. VIII, No. 1 (February, 1961), p. 170.

communication situations. To the extent that this technique can measure connotative meaning in a situation, then those researchers interested in studying the communication process in detail may find the semantic differential a useful device for quantifying meaning in a communication event.

In addition, several of the studies cited closely resemble parts of the present vernacular of business communications. Communicators in business have advocated for quite some time the use of active voice sentences in pieces of writing. This principle eliminates much of the sluggish, dull, and listless writing quality found in letters and reports when passive verbs are overused. Likewise, that people will identify more closely with statements associated with themselves is not foreign to business communicators. Known as the"you viewpoint," this guide suggests that messages structured from the reader's point-of-view will elicit a more favorable response, since such a response works to the reader's best advantage.

The business communications literature does not contain principles regarding changes in meaning either through time or through verbal satiation. From communication theory, it is believed that individuals continually evaluate reality and that meaning exists in the mind; however, a specific principle of written communication which predicts that meaning will change over time does not exist. Hypothesis Four of this study will attempt to examine the idea of meaning variations over time in more detail. Although previous studies indicate that meaning relative to single word units does change between different age groups and within the same group by verbal satiation, Hypothesis

Four will expand these preliminary findings. It will explore the idea of a change in meaning over time in the same group as a result of more complete message units--a series of business letters. Perhaps the outcome of this examination will result in a new principle of written communication which will explain the causal relationship between meaning change and message structure.

While business communicators do not dwell in the area of emotions, per se, they do realize that highly irritated readers become irrational ones. Thus, effective business writers choose symbols which convey the best connotative meanings when they construct written messages. Certainly, the idea of an emotion-meaning relationship is implied in this principle of positive emphasis.

In summary, most of the studies presented in this section have close counterparts in the business communication area. However, the business communication discipline lacks empirical evidence to support the combined effect of its principles. It is hoped that the following experiment will generate some of the testing that is needed in this field.

E. Preview

With preliminary factors such as the purposes of the research, hypotheses, limitations, importance of the study, and rationale of related studies firmly established, chapter two moves directly into an amplified examination of the methodology of the experiment. In this section, the logic of the experimental design unfolds and specific subtopics such as selection of experimental groups, design and sequence of

letter messages, duration of the study, procedure for testing, and techniques of refining the data are discussed.

Chapter three analyzes and interprets the results of the study. Here the statistical data generated by the semantic differential are inspected for each of the experimental groups; also, comparisons are made between these groups.

The final chapter, chapter four, reiterates the basic hypotheses and matches these hypotheses against the results given in chapter three to verify or reject them. Suggestions are also made for further research in the communications area.

CHAPTER II

METHODOLOGY OF THE RESEARCH

Examination of related studies has shown that the semantic differential presents a useful research technique for assessing communication situations. Too, most principles of business writing require empirical support for the causal relationships they explain. With the use of the semantic differential in communications research justified and the need for validating certain principles of business writing quite ostensible, an experiment was planned to test the effect of selected business writing principles on communicatee images. By creating experimental conditions and measuring certain facets of these conditions with the semantic differential, the validity of the four hypotheses could be decided. The nature and intent of the experimental design, special problems associated with the study, and the methods by which the data were refined are basic to understanding the pattern of this research.

A. Nature and Intent of the Experimental Design

As a method of research, experimentation involves manipulating a variable element in a situation while holding other factors constant. The purpose of this manipulation is to determine the effects of the experimental variable. Since research problems using experimentation require tailor-made designs, the nature of the specific experimental

plan used in this project and the way in which the semantic differential was combined with the experimental scheme demand special consideration.

1. Use of After-Only Pattern

Several modifications of the basic experimental situation exist whereby the effect of an experimental variable can be examined. Of these possible designs, the one that most nearly approaches the experimental plan used in this research is the after-only design. In this method, the effect of an experimental variable is measured after the factor has been exposed to one or more experimental groups.

The after-only pattern was extended somewhat in the present experiment. Two groups of various letter messages, structured with and without accepted principles of business writing, comprised the experimental variables to be tested. These binary series of messages were directed to three groups of subjects in the following alternating fashion:

Group 1--Bad	Group 2--Good	Group 3--Good and Bad Combination
Received messages not structured with principles of business writing.	Received messages structured with principles of business writing.	Received both good messages (structured with principles) and bad messages (not structured with principles) for each letter situation.

The purpose of this design was to investigate the effect of various message stimuli on communicatee images. By comparing responses of subjects in Group 1 against responses given in Group 2, the effect of certain principles of business communication could be determined.

The role of Group 3 was somewhat different as contrasted with the function of Groups 1 and 2. Not a control group, Group 3 served as a base for comparing the combined effects of good and bad message stimuli. When this group read both types of messages for each letter situation which the other two groups read independently, the interactive effect of good and bad messages could be compared to responses given in Groups 1 and 2.

2. Selection of Companies

For any communication to occur, four fundamental elements--a sender, a message, a situation, and a receiver--are necessary.[1] Adapting these elements to the present experiment set up to test the four hypotheses, the parts become: (1) the sender--a fictitious life insurance company, (2) the message--various business letters, (3) the situation--different business circumstances in which an insurance company needs to impart information or make requests, (4) receivers--student respondents at Louisiana State University.

Selection of a fictitious life insurance company as the sender in the communication situations in this experiment deserves special justification. If a real-life company had been chosen, previous experience with the company might have interfered with testing the experimental variable, different message stimuli. Thus, two imaginary life insurance companies were created and named Company A and Company A'.

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[1] Lee O. Thayer, Administrative Communication, Richard D. Irwin, Inc., Homewood, Illinois, 1965, p. 45.

By its nature, life insurance represents an intangible product and this abstractness parallels the ideas of psychological meaning and semantic space. Too, it was felt that student subjects in the experiment would hold some interest in life insurance, since most of them would assume greater financial responsibility in the future.

3. Specific Application of Semantic Differential

Setting up a semantic differential test involves a two-step process: (1) selecting concepts to be measured, and (2) choosing bipolar scales on which concepts are rated. The overall purpose in using the semantic differential in this experimental design was to measure the impressions of various message stimuli. That the semantic differential plays an essential part in this research plan is justified by the fact that this technique can provide the means by which to examine effects of the experimental variable, different message structure. Both elements of the semantic differential, concepts and scales, warrant further discussion as they were precisely adapted to experimental conditions in this research.

Selection of Concepts. The initial step in semantic differential research begins with a selection of concepts to be measured--those abstractions to which meaning can be attached. Several possibilities existed in the experiment which could have been classified as potential concepts--the product (life insurance), the writer of the letter message, or the companies from which the messages originated. Of these possibilities, the company image was selected as being most important.

This decision was guided by the conventional belief that all business letters have two basic goals: (1) a primary objective--to convey information or to make a request, and (2) a public relations objective--to enhance the company image.[2] Practically, these objectives are inseparable, but the second goal served as the basic criterion for choosing the company image as the concept to be studied. How people feel about a company is a product of many impressions--salesmen's efforts, all types of advertising, the customer's perception of the goods and services offered, and many others. Surely, the letters that a business writes and sends to the public constitute part of a company's public relations effort. Thus, the company image, as determined by various message designs and as measured by the semantic differential, evolved as the concept to be rated in the experiment.

After the concept was chosen, naming the two companies presented another problem in designing the research plan. As previously noted, authentic company names could not be used since it was believed that previous identification with these companies would negate control of the experimental variable. Accordingly, two fictitious companies were created--"Company A," the firm which used accepted principles of business writing in its letter messages; and "Company A'," the business which did not incorporate these principles in its writing efforts. The two companies were named in this manner because other company titles

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[2]Raymond V. Lesikar, Business Communication: Theory and Application, Richard D. Irwin, Inc., Homewood, Illinois, 1968, pp. 128-130.

would connote degrees of semantic space which adjective scales in the semantic differential were designed to measure.[3] By creating two fictitious life insurance companies and naming them Company A and Company A', it was hoped that these procedures would provide the first step in specifically applying the semantic differential to the experimental plan designed to test the four hypotheses.

Selection of Scales. A second step in designing a semantic differential concerns the selection of bipolar adjective pairs, better known as scales, on which concepts are rated. Although selection alternatives between adjectives could vary from three, five, seven, nine, or eleven point intervals, Osgood prefers the seven-point scales.[4] In addition, two criteria, factor representativeness and relevance to the concept,[5] guide actual selection of adjective scales in semantic differential research. While relevance is largely an intuitive standard, factor representativeness mirrors a more objective guide which pertains to common synonymity of certain adjectives on various dimensions of semantic space.

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[3]For example, company names such as A-1 and A-2; 1 and 2; A and B; XYZ and ABC; could convey certain dimensions of good-bad, large-small, heavy-light, etc. Since these bipolar scales were included in the semantic differential test, such names could not be used.

[4]Charles E. Osgood, George J. Suci, and Percy H. Tannenbaum, The Measurement of Meaning, University of Illinois Press, Urbana, Illinois, 1957, p. 85.

[5]Fred N. Kerlinger, Foundations of Behavioral Research, Holt, Rinehart, and Winston, Inc., New York, 1965, p. 569.

Osgood's Thesaurus Study[6] served as the primary source from which scales used in this research were obtained. After applying the relevance criterion to Osgood's seventy-five possible scales, a list of thirty-five potential scales was determined; however, this initial selection seemed lengthy. By applying the factor representativeness standard, the initial tally of thirty-five was reduced to twenty-one. The final twenty-one scales reflected six dimensions of semantic space, as Table I shows. By far the largest number of adjective pairs were evaluative ones, followed next in significance by potency and activity scales. Since the study involved appraising and assessing the images of two life insurance companies, this heavy weighting of evaluative adjectives seemed proper. However, factor representativeness and relevance dictated that other scales such as tautness, receptivity, and novelty be included also.

To control for subject response bias, eleven of the twenty-one scales were reversed. This measure was taken to insure that respondents would have to think independently about each adjective pair and how it related to the concept being rated. The process of deciding which scales were to be reversed was accomplished randomly. After numbering each adjective pair and using a random numbers table, the following scales were inverted:

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[6]Osgood, et. al., op. cit., pp. 53-61.

TABLE I

ADJECTIVE SCALES, DIMENSIONS OF SEMANTIC SPACE, AND FACTOR SCORES OF THE SEMANTIC DIFFERENTIAL USED IN THE EXPERIMENT

	Bipolar Adjectives	Dimension of Semantic Space	Factor Scores
1.	good - bad	Evaluative	1.00
2.	kind - cruel	Evaluative	.52
3.	grateful - ungrateful	Evaluative	.49
4.	successful - unsuccessful	Evaluative	.51
5.	meaningful - meaningless	Evaluative	.41
6.	progressive - regressive	Evaluative	.43
7.	positive - negative	Evaluative	.48
8.	reputable - disreputable	Evaluative	.68
9.	wise - foolish	Evaluative	.57
10.	healthy - sick	Evaluative	.33
11.	pleasurable - painful	Evaluative	.37
12.	optimistic - pessimistic	Evaluative	.37
13.	severe - limited	Potency	.43
14.	heavy - light	Potency	.48
15.	serious - humorous	Potency	.23
16.	large - small	Potency	.21
17.	active - passive	Activity	.98
18.	fast - slow	Activity	.35
19.	angular - rounded	Tautness	.95
20.	new - old	Novelty	.97
21.	savory - tasteless	Receptivity	.95

Adjective Pair	Number
good - bad	1
kind - cruel	2
grateful - ungrateful	3
positive - negative	7
reputable - disreputable	8
wise - foolish	9
large - small	11
painful - pleasurable	12
humorous - serious	16
slow - fast	18
old - new	20

The complete semantic differentials used in the experiment are found in Appendix A. At the top of each semantic differential appears the concept to be rated and beneath it the twenty-one descriptive scales. Instructions for using the semantic differential precede the concept and scale combinations.[7]

4. Test Group Selection

To properly conduct an experiment and measure a predetermined experimental variable, controllable conditions are needed. Thus, a classroom environment seemed appropriate for an exploratory effort to judge the validity of certain hypotheses of written business communications. Realizing that classroom conditions would not exactly parallel the real business world, three sections each of Principles of Marketing and Principles of Management at Louisiana State University were selected as test groups in the experiment.

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[7]Instructions to those using the semantic differential are fairly standardized. Osgood presents a typical set of instructions which he has found useful in his research. See The Measurement of Meaning, pp. 82-84. In this study, however, the standard instructions were altered in parts to fit the needs of the research.

Choosing undergraduate business students at basically the sophomore level held some merit especially since most of these students had not received training in business communications. If groups had been selected from junior or senior classes, students in these classes would have been taking or had already taken the business communication sequence (Management 71-72). Such training would have biased the experimental results. To remove the possibility of bias, specific instructions were given at the beginning of the study for those students who had taken or were taking at that time any courses in business communications to eliminate themselves from the experiment.

Table II shows the type of communication each group received, the initial class size, and the time at which each section met.

TABLE II

SIZE, MEETING TIME, AND TYPE OF COMMUNICATION RECEIVED FOR TEST GROUPS USED IN THE EXPERIMENT

Group	Size	Meeting Time	Type of Communication Received
A	58	2:30 MWF	Good
B	41	2:30 MWF	Good
C	53	1:30 MWF	Bad
D	44	8:30 MWF	Bad
E	59	11:30 MWF	Good and Bad
F	42	9:30 MWF	Good and Bad

Since the message sequence required specific control from day to day, only MWF classes were used. Also, an effort was made to keep the three basic groups--good, bad, and combination--relatively equal and to balance each marketing section with a management section.

5. Construction of Message Stimuli

Two sets of letter messages, one group employing accepted principles of business writing and the other group excluding such principles, were constructed for the three test groups. In composing these message stimuli, ten situations were devised which represented typical writing circumstances in the insurance industry. Some of these situations assumed that receivers had previously corresponded with the insurance company and had requested certain information, while others inferred that the company initiated the communication effort. A description of each of these letter messages, the assumptions of each situation, and the sequence in which letter messages were presented to the groups follow.

Letter 1 - A good-will building, public relations effort following the customer's first purchase of a $10,000 whole life insurance policy.

Letter 2 - Reply to a request for information explaining how insurance proceeds would be paid to a beneficiary.

Letter 3 - Explanation of the procedure involved in changing beneficiaries. Assumes a previous request for the letter.

Letter 4 - Request for a second premium check after the first one had been misplaced or lost.

Letter 5 - Request for full payment of a quarterly premium, part of which was paid.

Letter 6 - Explanation of grace period clause sent after a request had been made concerning active status of insurance coverage.

Letter 7 - Request for payment of a two-week overdue premium.

Letter 8 - Explanation of loan policy to a customer who had requested a $100 loan.

Letter 9 - Sales letter to customers requesting applications for additional insurance coverage.

Letter 10 - Refusal of a request for additional insurance coverage. Assumes customers applied for an additional policy but could not qualify because of medical reasons.

From another vantage point, it is possible to classify these situations by the nature of the writing effort involved. Assuming that three basic writing situations exist, Type 1--neutral or good news, Type 2--negative, and Type 3--persuasive, the letters, classified by the character of the situation and writing effort, become:

1. Type 1--Letters 1, 2, 3, 6, 8
2. Type 2--Letter 10
3. Type 3--Letters 4, 5, 7, 9

Five of the ten messages fall into the good news category, while four can be viewed as persuasive in nature. Only the last letter message, letter ten, ranks as a message containing negative information.

The use and nonuse of principles of business writing in the two series of messages differentiated the contents of the various letters. Since the principles used in one group of messages affected the

strategy, content, and design of the letter stimuli, the most significant ones warrant succinct recognition.[8]

1. Principle of Planned Presentation--neutral and good news messages dealt with directly; negative and persuasive situations written in indirect fashion.

2. Principle of Positive Emphasis--selecting words which will elicit positive meanings in a reader's mind.

3. Principle of Conversational Tone and Natural Expression--substituting friendlier and more natural language for worn out expressions, rubber stamps, and routine, repetitious phrases.

4. Principle of Adaptation--expressing message units in words which parallel the reader's frame of reference.

5. Principle of You-Viewpoint--structuring messages from the reader's point of view and highlighting his interests and well-being.

These major principles plus other ones, namely the principles of transition, concrete word selection, and emphasis, determined the message structure in one series of message stimuli, whereas these principles were avoided in the other series. Appendix B contains the binary sets of messages for each of the ten writing situations. These messages constituted the variable factor in the experimental design.

6. Duration of the Experiment and Testing Procedure

The general intent of the experimental design was to direct a constant flow of message stimuli to the respective groups and to

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[8]Most every textbook in the field of business writing contains a complete discussion of these principles. For instance, see Menning and Wilkinson, Communicating Through Letters and Reports, Chapters 1-4, and Lesikar, Business Communication: Theory and Application, Chapters 7-8.

measure impressions of the groups at select times during the message sequence with the semantic differential. It was decided that two semantic tests would be given--one after letter five, the mid-point in the message sequence; another after letter ten, the final message in the series. Since ten message exposures and two semantic differentials were to be administered to each group, a total of twelve class days were required for the study.

Experimentation began on March 3, 1968, and all tests were completed on April 5, 1968. Before the experiment was started, a memorandum was sent to professors of the test groups acquainting them with certain facets of the study (see Appendix C). On the first day of the experiment and before the first message exposure was distributed, instructions concerning the general conduct and duration of the study were read to each test group (see Appendix D). After these instructions were read, the section instructors administered the first letter exposure and the experiment continued in sequence for the next twelve consecutive class days.

B. Special Problems in the Experimental Strategy

Several problems arose before and during the conduct of the study. While problems associated with message-testing sequence in Group 3 and student involvement were anticipated prior to the beginning of the experiment, significant issues linked with student attendance and dismissing of classes were unforeseeable. An analysis of each of these anticipated and unanticipated problem dimensions will trumpet greater understanding of the experimental strategy.

1. Order of Messages and Semantic Tests in Group 3

Detected before the actual conduct of the study, a first significant problem concerned the message-test sequence from day to day in the third test group--that group which was supposed to read and evaluate both sets of messages, good and bad. If Group 3 were to read either the good or bad messages first in each exposure situation, it was thought that over conditioning and bias would result. To reduce the possibility of bias in this test group, a random method, giving each message and test an equal chance for first presentation, was used to determine the sequence of exposure units and semantic tests for each writing and testing situation in the experiment.

First, it was decided that odd numbers and even numbers in a random numbers table would be associated with the good messages and bad messages, respectively. Then a sample of ten consecutive digits was drawn from the table which corresponded to each of the ten writing situations in the experiment. By looking at whether the numbers in this sample of ten were odd or even, the order of message presentation for each exposure was determined. The outcome of this procedure yielded this internal order for the ten message situations in Group 3.

Situation 1--Bad, Good

Situation 2--Good, Bad

Situation 3--Good, Bad

Situation 4--Bad, Good

Situation 5--Good, Bad

Situation 6--Good, Bad

Situation 7 --Bad, Good

Situation 8 --Good, Bad

Situation 9 --Good, Bad

Situation 10--Good, Bad

Test sequence emanated in similar fashion. Retaining the same odd-even references of odd, good, and even, bad, one number was selected randomly from a random table. This digit was even, thus indicating that subjects would evaluate Company A' (Bad) first on the initial semantic test. Because only two tests were scheduled during the experiment, the test order was reversed for the second semantic evaluation.

2. Subject Involvement

A second foreseeable problem involved subject identification in the experiment. Because administration of the study proceeded under classroom conditions, it was anticipated that students could assume that the experimental conditions were artificial; thus, each student might not participate mentally each day in the study. To overcome this environmental barrier, subjects were asked to write a short opinion of the company which sent the letter after they read each message exposure. Also, subjects were requested to put their names on each evaluation, which was collected after each exposure session.

No attempt was made to read, classify, or evaluate subject critiques after they were accumulated. The sole purpose of the daily evaluation procedure was to insure that each subject would read each message exposure and think each day about the company. However, respondents never knew that their comments were not being evaluated. For

the subjects, each day represented a test period. This design technique, it was hoped, would maintain interest and attention throughout the experimental period.

3. Class Attendance

Although student attendance was anticipated to be a partial problem during the study, the magnitude of this problem did not appear until actual conduct of the research. As stated previously, it was the intention of the experimental pattern to maintain a constant flow of message stimuli to all groups from day to day and to measure impressions formed by these stimuli at two strategic points in the study. When some subjects missed exposures because of class absences, a cleavage in the message sequence occurred and complete control of message timing was forfeited.

An attendance tally for each student was kept throughout the experiment. When a subject missed an exposure, he was required to make up all exposures that were given during his absence. Before taking either of the semantic differential tests, all students had read and evaluated each intended message exposure. However, some students did not receive the various messages as consistently or at the same time that others did.

4. Dismissing of Classes

Last, the dismissing of certain classes used as test groups interfered with the exposure sequence and the regular conduct of the experiment. Basic classes of marketing and management formed the

fundamental test groups in the study and these classes held group examinations at night once during the experiment. To compensate for this extra meeting, each class was dismissed for one regularly scheduled class day. In addition, several marketing classes were required to attend meetings of the campus Marketing Club. These interruptions caused discontinuity in the systematic sequence of message exposures. Despite these exposure interferences, however, only one of the test groups had to double the exposures given on one class day to complete the experiment. Since this twofold exposure sequence did not occur on a test day, its effect on the experimental results was considered nil.

C. Refining the Data

With all exposure units administered and both semantic differential tests completed, the data had to be coded and punched on input cards for a computer program, designed to generate statistical measures which would benefit interpretation of the experimental results. After recording the responses to both semantic measurements, it was found that some of the data were incomplete and, consequently, the groups were not equal in size. Discussion of methods of coding and equalizing the test groups concludes analysis of the research design and fanfares specific interpretation of statistical results of the experiment.

1. Coding the Data

After assembling the semantic impressions by test groups, each subject profile was numbered in sequence. By using a seven-point range corresponding to the columns between the bipolar scales from left to right, student responses on both semantic differentials were quantified, recorded, and transferred to input cards for a computer program. In addition, each input card was keyed to identify the respondent, the group that he represented, and whether the responses were given on the first or second semantic test.

2. Equating the Test Groups

When the results of both semantic tests were recorded, it was discovered that some of the data were incomplete, perhaps for several reasons. A few students who began the experiment had dropped the course which was used as a test group. Also, some sets of responses were partially complete because of absences on the day the semantic tests were administered. Statistical techniques associated with the semantic differential dictated that each group of responses be identical in size; therefore, the data had to be reviewed still further.

To equate the three groups, each of the test groups was inspected to find the least number of usable sets of responses. Group 1 contained 82 retainable tests, Group 2 had 75, and Group 3, 86. To reduce the responses in each group to 75, the least number of available tests, 7 semantic tests from Group 1 and 11 from Group 3 had to be eliminated. These deletions were achieved randomly by first assuming that the total number of responses in Groups 1 and 3 (82 and 86,

respectively) constituted separate universes. Then individual samples of 7 and 11 were drawn from a random numbers table; tests corresponding to these numbers in the two groups were dropped. Results of this process balanced each group at 75 tests (225 in total) so that existing computer programs for statistical manipulations of the data could be employed.

D. Summary

Binding the triad of the nature of the experimental pattern, special problems connected with the research, and the process by which the data were coded and refined, this chapter, in retrospect, has scrutinized the complete research design of the study, structured to test the validity of certain hypotheses of written business communication. A specific variation of the after-only experimental method, combined with the semantic differential as a testing technique, was used to measure effects of the variable factor in the study, different message structures. After ten letter messages for each of two fictious life insurance companies were written, three groups of subjects read and evaluated the communication efforts in variegated fashion--one group received message exposures structured according to accepted principles of business writing, a second group received message units not structured with principles of business writing, and a third group read and evaluated both binary exposures for each communication situation at the same time. Following the fifth and tenth message exposures, semantic differentials were administered to test the images of the companies. The experiment lasted for twelve class days.

Two categories of special problems, foreseeable and unforeseeable, were associated with the research design. The internal sequence of message units and tests from day to day in Group 3 was anticipated and a random method determined the presentation order for each message exposure and semantic test. Also, student involvement, expected to be a problem while the design was being crystalized, was overcome by having subjects write their opinions of the companies each time they received a message exposure. Unexpected problems were two: student attendance and dismissing of classes. The attendance issue was surmounted somewhat by keeping a close attendance record of each subject during the experiment. Each time a subject missed an exposure, he made up this exposure when he returned to class. Although dismissing of certain classes interfered with the planned sequence of message presentation, the only noteworthy effect was that one of the sections used in the study had to read two exposures on one day.

After the semantic differential results were collected, responses were coded and key punched as input data for a computer program. Because the three groups were unequal, each of the test groups had to be reduced to a final size of seventy-five. With the data refined and in workable form, attention can now pivot to an interpretation of the results of these data collection efforts.

CHAPTER III

AN ANALYSIS OF THE EXPERIMENTAL RESULTS

Although the semantic differential generates a plethora of quantitative data, results of this experiment are meaningless unless they are evaluated within the framework of the four hypotheses of the study. Briefly, the hypotheses around which this experiment was structured are (1) that written communications form communicatee images, (2) that good communications create favorable communicatee images, (3) that bad communication efforts shape unfavorable images, and (4) that mental images formed through written communications change over time. Thus, the primary task of this chapter is to relate the experimental results to these four hypotheses.

To accomplish this objective, a three-stage plan is needed. First, inspection of scale variance will determine which semantic adjectives were truly effective in distinguishing concepts of the study. Second, analysis of semantic profiles and interspace concept distance will provide the substance of the test proof or disproof of the hypotheses. Finally, close scrutiny of "t" values for certain concept relationship will indicate the degree of statistical significance with which the experimental results are reported. Taken as a whole, this three-dimensional strategy should firmly corroborate or discredit the postulates of this experiment.

A. Dispersion of the Semantic Responses

An inquiry into the dispersion of the responses on each adjective scale used in the semantic differentials will disclose whether the twenty-one bipolar pairs were trenchant in differentiating the meaning of the concepts rated in the study. It will expose also those semantic adjectives which may need to be eliminated from additional statistical analysis of the experimental results. While a large variance on any semantic scale reflects heterogeneous feelings concerning the rating of certain concepts, small variances imply the opposite--that respondents exhibited homogeneous, consistent sentiments relative to the concepts they appraised. Only those binary scales which mirror and signify congruous meaning throughout the three test groups will be used to prove or disprove the hypotheses of this research.

Results of a frequency distribution of variances for each semantic scale in all groups and test intervals are given in Table III. Close inspection of all variance scores, supplied in Table VIII, Appendix E, revealed that cell divisions used in the distribution were appropriate. As the interval pattern in Table III suggests, some adjective scales displayed wider response dissemination than others. More than half of the response variance occurred outside the first cell interval (137 and below) on six adjective scales: 4, 5, 8, 13--evaluative; 16--potency; and 20--novelty. This extreme variance seemed to indicate that respondents inconsistently rated various concepts on these bipolar pairs. Because scales 4, 5, 8, 13, 16, and 20 exhibited excessive degrees of variation, they were eliminated from further

TABLE III

DISTRIBUTION OF RESPONSE VARIANCES BY INTERVALS FOR ALL GROUPS AND TESTS

Semantic	137.5 and below	137.5-162.5	162.5-187.5	187.5-212.5	212.5-237.5	237.5-262.5
1	4	4				
2	8					
3	5		2	1		
4	1	3	3	1		
5	3	5				
6	4	1	3			
7	6	1	1			
8	3	2	3			
9	5		2	1		
10	6	2				
11	4		2	2		
12	7	1				
13	1		2	5		
14	7	1				
15	7	1				
16	1	2	2	2		1
17	5		2	1		
18	5	1	1	1		
19	6	2				
20	3	1	2	1	1	
21	5	3				

Source: Table VIII, Appendix E

statistical manipulations of the data. Deletion of these semantics insured that the statistical results were truly consistent and that the remaining semantic scales measured effectively the impressions of all respondents. With the six scales eliminated, each of the fifteen residual semantics contained at least four or more dispersion values which fell within the limits of the first variance interval.

B. Group Profiles and Interspace Concept Distance

While scale variances denoted the extent to which individual response scores differed from one another, mean values, plotted for each of the fifteen semantic scales and connected together to form semantic profiles, prove useful for concept comparison between groups and between test intervals. Such multiple contrasts of group semantic profiles provide a harbinger of specific proof or disproof for the hypotheses of the experiment. Moreover, intervening semantic space distances between concepts, measured quantitatively by a significant statistic known as the D value, will reinforce and complement all profile analyses and comparisons.

1. Group Concept Structure By Test Periods

Mean values, by scales, for each test group and impression interval appear in Table IX, Appendix F, and provide the substructure for all profile graphics used in the following investigations. The succeeding analysis will inspect individual group images first; then, on a higher level of abstraction, similarities and differences between concepts lineations will be observed.

When mean scores are plotted and joined collectively for each of the three test groups, semantic profiles, such as those shown in Fig. 1, result. If Hypotheses One, Two, and Three were untrue, all profiles would be superimposed in a straight, vertical line at the middle positions of each semantic scale. Such profiles would indicate that subjects possessed no mental concepts of the various companies after receiving different message stimuli. This meaningless situation is not the case, as Fig. 1 reveals.

Closer scrutiny of the profiles in Test 1 shows that the groups declared diverse images of the companies involved. The most dramatically favorable image in Test 1 was that of Company A in the third test group. This profile can be considered most propitious because of more extreme, more auspicious scale values and the semantic dimension pattern. Dimensionally, subjects in Group 3 envisioned Company A as more positive on evaluative scales, less potent, more active, less taut, and more receptive than any other profile formed in the other groups. Such dimension oscillation would logically seem to infer that subjects in Group 3 perceived Company A with a high degree of approving connotation.

Although images of Company A' in Groups 1 and 3 parallel one another quite closely, the most adverse profile in Test 1 relates to Company A' in Group 3. This image-impression penetrates and extends farther on more extremely unfavorable scale positions than those of any other group. Conceptually, subjects in Group 3 rated Company A' as evaluatively more sinister, stronger, less active, more tense, and

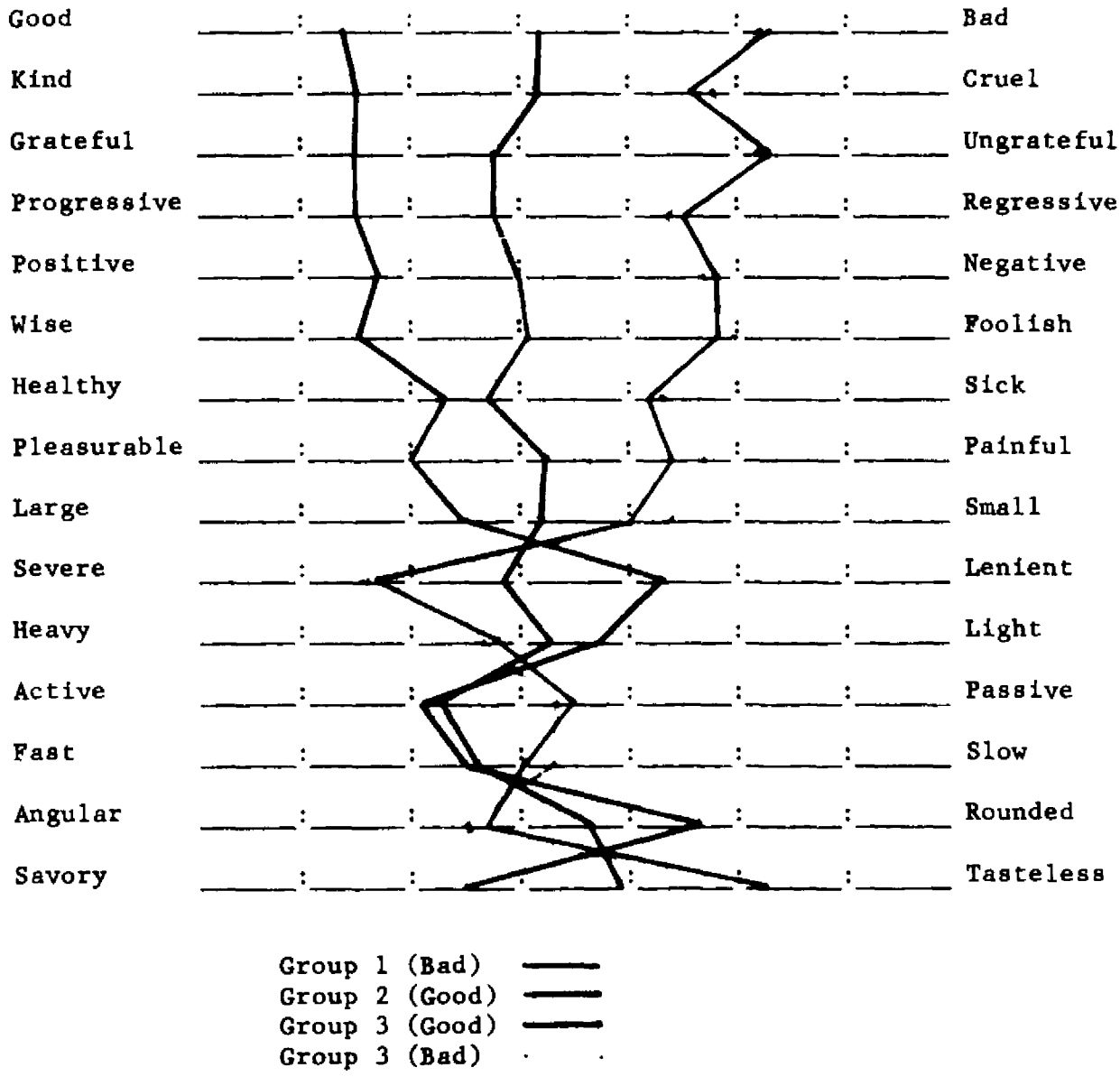

Fig. 1--Semantic Profile Patterns for Company A and Company A' in Test 1

less receptive when compared to semantic ratings of other groups. An abstraction such as this would appear to symbolize the antithesis of connotative favoritism.

Between these extremes are located the profiles constructed in Groups 1 and 2. The image of Company A', Group 1 exhibits strong similarity to that of Company A', Group 3. Although only slight differences exist between them, Group 3's image emerges as most unfavorable. A more notable distinction exists between profiles of Company A in Groups 2 and 3 where magnitude discrepancies between the two profiles appear superlative to profile differences relative to Company A' in Groups 1 and 3. Even though profile direction and dimension structure indicate that both profiles of Company A are favorable, subjects in Groups 2 and 3 construed Company A with differing degrees of assertive perspective. Whereas prodigious profile differences exist on evaluative scales, the profiles feature propinquity on the activity dimension.

Results of the second semantic test (Fig. 2) fortify still further the first three hypotheses and reinforce results of Test 1. Again, the most extreme profiles, favorable and unfavorable, relate to Company A, Group 3 and Company A', Group 3. Images of Company A, Group 2 and Company A', Group 1, respectively, intercede and parallel somewhat the more intense judgements, but do not match their magnitude. While profiles formed in Test 2 bear close resemblance to those in Test 1, the spread between images of Company A' in Groups 1 and 3 seems to be greater in the second semantic interval. Also, differences on the activity scales relative to Company A are more pronounced in Test 2.

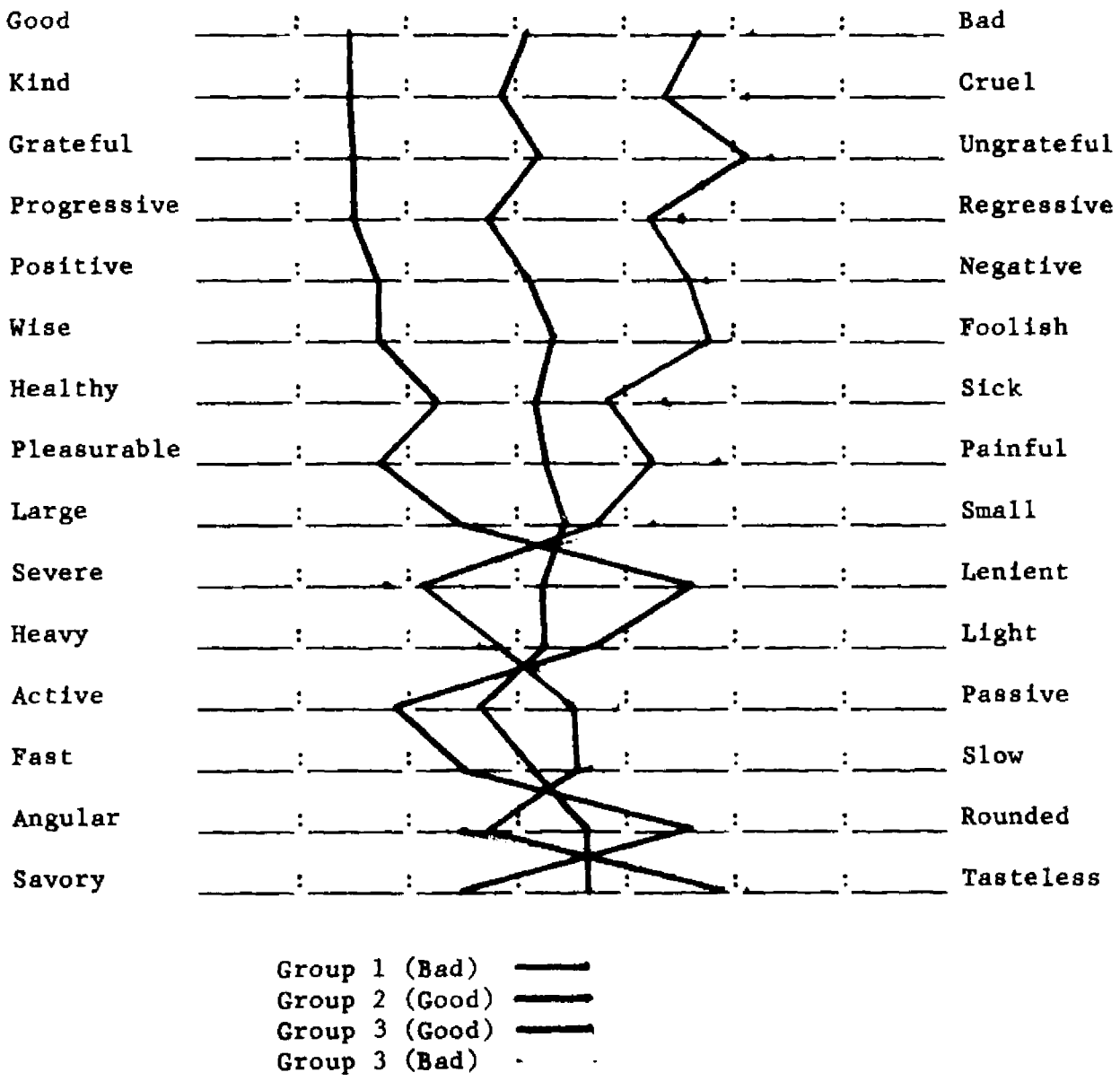

Fig. 2--Semantic Profile Patterns for Company A and Company A' in Test 2

Considering the semantic results in both impression periods, trends, similarities, and differences become apparent. On both semantic differentials, images of Company A and A' molded in Group 3 emerged as the most approving and oppugnant profiles. Between these more intense assessments were found the impressions of Company A and A' fashioned in Groups 1 and 2, respectively. Greater profile differences existed between the images of Company A in Groups 2 and 3 when compared to profile variations of Company A' in Groups 1 and 3. Moreover, impressions of Company A' constructed in Group 1 and 3 seemed more widely separated in Test 2 than in Test 1. Although intensity judgements varied from group to group throughout the test intervals, in general profiles relative to Company A rated connotatively good, while those relative to Company A' rated connotatively bad.

2. D Statistic Reinforcement

Although profile analyses and comparisons are helpful in visualizing group profile patterns, another useful analytical method associated with semantic differentiation is known as the D statistic.[1]

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[1] D statistics used in this analysis were computed in the following manner:

$$D = \sqrt{\sum d^2}, \text{ where}$$

D = linear distance between two concepts, and

$\sum d^2$ = the subtraction, square, and summation of all mean scale responses between two given semantic differentials.

For additional discussion of the specifics of D statistic calculations, see Osgood, et al., The Measurement of Meaning, pp. 89-97.

Computed as a numerical value, this statistic indicates the linear distance between two concepts in semantic space. While large D scores signify that two concepts are remotely separated in semantic space and differ in connotative meaning, smaller D values show lesser degrees of connotative difference. Such quantitative values will not designate the intensity or direction of a connotative judgement; however, their use does have merit for reinforcing the semantic profile analyses.

An inspection of D scores in Table IV for Tests 1 and 2 provides a pinion of consistent support for the semantic profiles.

TABLE IV

D STATISTIC MATRICES SHOWING LINEAR DISTANCES BETWEEN CONCEPTS IN TESTS 1 AND 2

Test 1

	1	2	3	4
1	0.00	5.63	10.00	.64
2		0.00	4.51	5.80
3			0.00	10.19
4				0.00

Test 2

	1	2	3	4
1	0.00	4.60	9.34	1.42
2		0.00	4.80	5.79
3			0.00	10.55
4				0.00

Key:
1 = Company A' (Group 1)
2 = Company A (Group 2)
3 = Company A (Group 3)
4 = Company A' (Group 3)

In Test 1, the largest linear separation (10.19) between any of the concepts concerned the spacial relationship of Company A, Group 3 and Company A', Group 3; the most convergent images, attested to by the smallest D value (.64), pertained to concepts of Company A', Group 3 and Company A', Group 1. That the latter images are the least divergent is substantiated by a look at the second largest D magnitude (10.00), which refers to the semantic distance between Company A, Group 3 and Company A', Group 1. Since the two most spacious D scores related to Company A', Group 3 and Company A', Group 1 and involved the common denominator of Company A, Group 3, it would seem logical that the minimum space distance should exist relative to Company A', Group 3 and Company A', Group 1. Following these extreme measures of semantic spacial separation are found D statistics of 4.51 (Company A, Group 2 and Company A, Group 3); 5.63 (Company A, Group 2 and Company A', Group 1); and 5.80 (Company A', Group 3 and Company A, Group 2). Viewed in this progressive sequence, the images of Company A, Group 2 and Company A', Group 1 successively pervade the more widely dispersed concepts of Company A and Company A' in Group 3. Thus, D statistics for Test 1 appear to anchore the preceding profile examinations.

Heuristic examination of D values for Test 2 reveals that all distance measures changed when compared to corresponding D statistics in Test 1. Some relationships became more expanded in semantic space, while others moved closer together. This observation in itself should establish confirmation of Hypothesis Four of the study; however, more

detailed inspection of this postulate will be given later. As in Test 1, the most massive interspace value in Test 2 (10.55) was linked to the images of Company A, Group 3 and Company A', Group 3. Too, this distance measure amplified slightly over the similar distance value of the same concepts in Test 1.

Although impressions of Company A', Group 3 and Company A', Group 1 again exhibited the smallest semantic span (1.42) of any of the concepts in Test 2, this value also dilated beyond its relative magnitude in Test 1. Remaining D statistics indicate the same general intervening position patterns between the more dispersed images as did those of Test 1, even though each of the values did demonstrate slight modification. Of the four remaining D scores, only one, the linear separation between Company A, Group 2 and Company A, Group 3 (4.80) increased in Test 2. All of the other magnitudes decreased slightly.

3. Image Diversity Over Time

While the foregoing visual and quantitative investigation of the concept design of each group by test interval approached verification of the first three hypotheses, a look at the data from a somewhat different vantage point will begin proof or disproof of Hypothesis Four--that image patterns will change over time. By examining the collective image structure relative to Company A and Company A' for both semantic intervals, the change in concept displacement over time can be determined.

Examination of Fig. 3, which displays profiles of Company A for Groups 2 and 3 in both semantic tests, reveals that two classes of

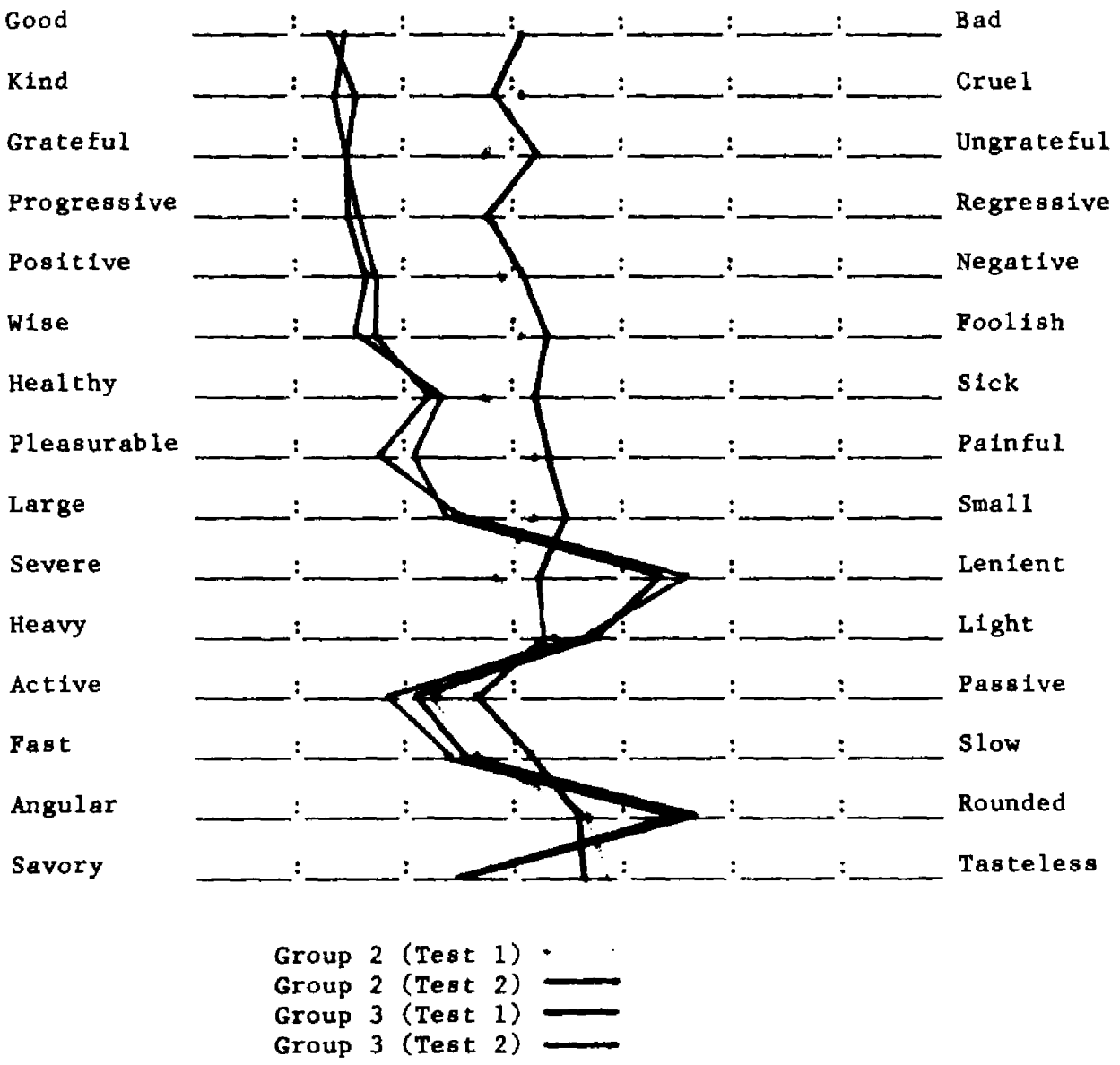

Fig. 3--Semantic Profile Patterns of Company A in Groups 2 and 3 for Tests 1 and 2

profile differences exist--first, group deviations between the images formed relative to Company A; and second, interval distinctions within each group between test periods. Considering the profile disparities between Groups 2 and 3, more favorable judgements relative to Company A were formed in Group 3. While subjects in Group 3 attached significant degrees of propitious connotation to Company A, the degree of meaning projected in Group 2 is less significant by comparison. Most responses in Group 2 plot closer to the midpoints or meaningless positions on the adjective scales.

Although the most positive images of Company A occurred in Group 3, an interval contrast of the two most pronounced profiles shows that a difference existed over time between Test 1 and Test 2, even though this variation is somewhat difficult to detect. Specifically, 7 of the 15 scales decreased in meaning from Test 1 to Test 2, 6 scales increased in meaning, and 2 scales showed no change.[2] In general, this pendulous movement suggests that Group 3's profile in Test 2 did change over that of Test 1, but in a less meaningful direction. Delamination of each semantic dimension reveals that 4 of the 8 evaluative scales decreased in intensity, while 3 increased and 1 remained neutral; 2 potency scales diminished in intensity and 1 magnified; and all activity and tautness scales increased, while the final scale, receptivity,

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[2]In this analysis, "increase" will mean that the average responses in Test 2 moved toward more extreme, outward positions on the scale continua; "decrease" will denote that averages moved inward toward the midpoints of the scales. This descriptive method gives no indication of the degree of meaning changes; however, it does yield a rough approximation of the direction in which profiles moved over time.

remained constant. These changes imply that the image of Company A in Group 3 became less positive in evaluation, less strong, more active, and more taut over time. Such dimension movements would appear to be a paradox, since decreases on evaluative scales on the one hand are offset by countervailing semantic influences of less strong and more active image sentiments on the other.

When profile changes from Test 1 to Test 2 in Group 2 are considered, several scales appear to generate more extensive degrees of change, and these movements, generally, progress toward the midpoints of the bipolar continua. Specifically, 11 of the 15 semantics indicated a reduction in meaning, 2 increased, and 2 showed no change. Viewed by dimensions of semantic space, 5 evaluative scales decreased, while only 1 increased and 2 remained constant; 2 potency scales decreased and 1 increased; and each of the remaining scales contracted over time. Thus, while the images of Company A in Group 3 changed almost imperceptibly and in a paradoxical fashion, the images of Company A in Group 2 changed more dramatically and consistently, with the direction of the profile movement indicating a less favorable connotation when compared to Group 3.

Profiles shaped in Groups 2 and 3 were quite separate and distinct between the two profile clusters; however, images molded for Company A' in Groups 1 and 3 were not as precise, as Fig. 4 so vividly demonstrates. Generally, all of the profiles are unfavorable--that is, they plot on extreme and different positions of the scale continua when compared to profiles of Company A. Furthermore, all of the profile

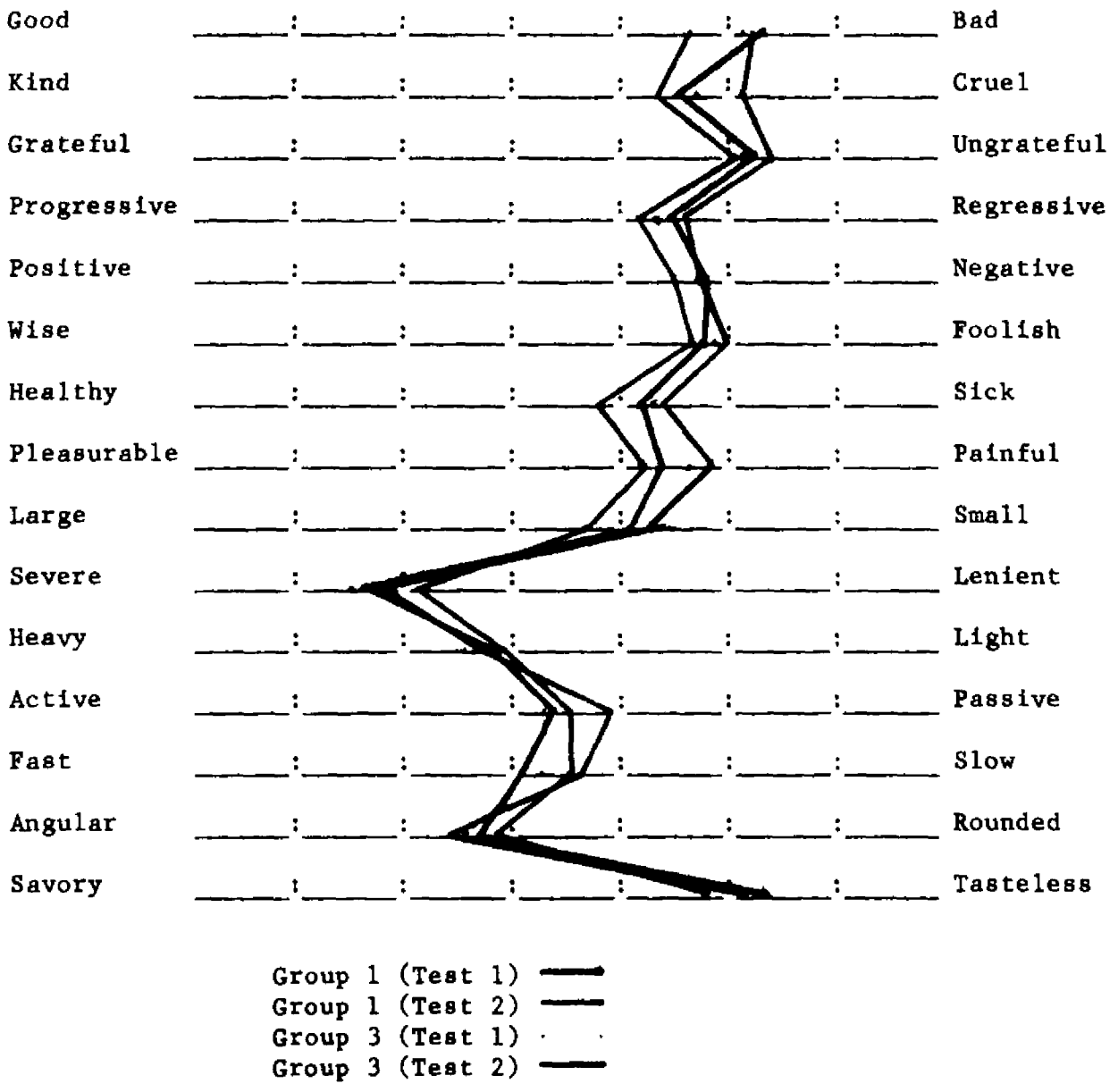

Fig. 4--Semantic Profile Patterns of Company A' in Groups 1 and 3 for Tests 1 and 2

patterns are similar and move in the same general direction from scale to scale. This uniformity indicates that subjects in Groups 1 and 3 generally agreed on the meaning of Company A', but the intensity of their judgements varied slightly between test periods and groups.

A glance at Fig. 4 should project the conclusion that the least meaningful profile resulted in Group 1, Test 2 and the most intense, most meaningful profile occurred in Group 3, Test 2. Average scale values in Group 1, Test 2 plot closes to the midpoints of the semantic continua, while more extreme judgements are found in the profile of Group 3, Test 2. In between these most intense and least intense profiles occur the semantic impressions of Company A' constructed in Group 1, Test 1 and Group 3, Test 1, respectively. When compared by successive dimension patterns to the profiles of Company A, the images of Company A' in all groups are more negative in evaluation, stronger, more inactive, more taut, and less receptive.

Over time, both profiles in Group 1 and Group 3 changed, but in opposite directions. In Group 1, the profile of Test 2 became less meaningful compared to its original position in Test 1. Of the 15 scales used, all showed decreases in intensity of meaning over time by moving toward the neutral positions on the adjective scales in Test 2. In Group 3, however, the second semantic test resulted in more profound judgements on some scales and less poignant feelings on others. Particularly, 7 of the semantic scales prolificated in semantic meaning, 7 diminished, and 1 remained constant between Test 1 and Test 2. Most of the adjective pairs indicating changes were evaluative ones--6 of

the 8 evaluative continua showed more extreme ratings in Test 2, which would imply that subjects perceived Company A' more negatively. In addition, only 1 other scale, tautness, demonstrated an increase in meaning intensity over time; all other scales revealed meaning reductions. Overall, results of Test 2 showed that subjects in Group 3 viewed Company A' as more negative, less strong, less active, more taut, and less receptive from Test 1 to Test 2.

4. Linear Separation of Concepts Between Test Intervals

As D values were used in previous analyses to identify the correctness of certain profile patterns, so, too, can they be of value to determine the extent to which image patterns changed over time. Such statistics will not disclose the path of image fluctuations; however, they should indicate interspace distances between concepts formed in the first period and those shaped in the second. In this respect, D scores should provide quantitative underpinning for Figures 3 and 4.

Based on D statistics for Groups 2 and 3 relative to image combinations of Company A (Table V), the relationship showing the most substantial linear separation was that of Group 2, Test 2 and Group 3, Test 2 (D=4.80). The closest profiles, according to Table V, concerned those of Group 3, Test 1 and Group 3, Test 2 (D=.48). Of particular importance, also, is the linear distinction between concepts formed in Group 2, Test 1 and Group 2, Test 2 (D=1.07). Since linear separations existed between the perceptions of Company A in both Groups 2 and 3 from Test 1 to Test 2, it would appear that Hypothesis Four of the study is correct. In addition, it is interesting to note that the

distance interval for Group 2, the independent group, is greater than the linear distinctions over time in Group 3.

TABLE V

D STATISTICS FOR VARIOUS COMBINATIONS OF IMAGES OF COMPANY A IN TESTS 1 AND 2

Test and Group Compared	D Score
1. Group 2, Test 1 - Group 2, Test 2	1.07
2. Group 2, Test 1 - Group 3, Test 2	.48
3. Group 2, Test 1 - Group 3, Test 1	4.51
4. Group 2, Test 2 - Group 3, Test 2	4.80
5. Group 2, Test 2 - Group 3, Test 1	4.78
6. Group 2, Test 1 - Group 3, Test 2	4.59

While D scores for Company A in Groups 2 and 3 ran the gamut from a low of .48 to a high of 4.80, D tallies for Company A', Groups 1 and 3, do not match such diversity. As Table VI reveals, images of Company A' in both groups cluster together more so than those of Company A. D statistics given in Table VI range from .64 to 1.42. Logically, concepts associated with the larger value in this statistical series should produce the most widely dispersed and, correspondingly, the least and most intense profiles of Company A'. A brief glance at Table VI identifies the impressions formed in Group 1, Test 2 and Group 3, Test 2 as the most and least meaningful profiles of Company A' throughout the experiment. This conclusion also seems to be consistent with the previous analysis of group profiles in Fig. 4.

TABLE VI

D STATISTICS FOR VARIOUS COMBINATIONS OF IMAGES OF COMPANY A' IN TESTS 1 AND 2

Test and Group Compared	D Score
1. Group 1, Test 1 - Group 1, Test 2	1.04
2. Group 3, Test 1 - Group 3, Test 2	.92
3. Group 1, Test 2 - Group 3, Test 1	1.24
4. Group 1, Test 1 - Group 3, Test 1	.64
5. Group 1, Test 2 - Group 3, Test 2	1.42
6. Group 1, Test 1 - Group 3, Test 2	1.16

Perhaps the most significant of the distance relationships presented in Table VI are those denoting the linear separation of concepts of Company A' between time periods. As was found in similar D statistics relative to Company A, a greater distance existed between Test 1 and Test 2 (D=1.04) in Group 1, the independent group, than the concept displacement in Group 3 (D=.92) for the same time interval. However, images of Company A in Group 3 were not as distantly separated over time when contrasted to impressions of Company A' in Group 3 (D=.48 compared to D=.92). And concept dispersion between tests for Company A, Group 2 was slightly larger than the two images of Company A', Group 1 (D=1.07 as opposed to D=1.04).

5. Possible Explanations for Group and Interval Semantic Patterns

In general, images formed in the three test groups appear to support the hypotheses of this research. Communicatees do construct images as a result of the messages they receive. Additionally, image

formation functions with the type of message conveyed--good messages, favorable images; bad messages, unfavorable images. Moreover, images created in one impression interval seem to change slightly when compared to images formed in another. The direction and magnitude of these image displacements fluctuate inconsistently between independent groups and those groups receiving both good and bad messages simultaneously.

To be sure, most of these conclusions can be explained as the effect of the experimental variable, different message stimuli. However, some questions still remain which need to be answered, for instance: Why are the image patterns formed as a result of communication structured with accepted principles of business writing considered good images? What caused the serendipity dispersion of images relative to Company A in Groups 2 and 3, when similar discrepancies did not occur relative to Company A' in Groups 1 and 3? And could uncontrollable factors have caused image patterns to transform over time? Answers to these fundamental questions will highlight more complete understanding of the study.

It was found in the profile analyses and comparisons that the profile designs of Company A followed a somewhat different semantic dimension pattern than those of Company A'. Although differing in proportion and magnitude between profiles, the impressions of Company A were more positive, less strong, more active, less taut, and more receptive than corresponding profiles of Company A'. Images following this pattern were rated connotatively better than those of opposite design.

Osgood notes that part of this trend can be attributed to factors of learning and development: "The noticeable tendency for both activity and power to be associated with positive evaluation . . . may represent a cultural semantic bias."[3] Although Osgood makes no mention of the tautness or receptivity dimensions, it would seem logical that a less firm and more receptive rating should be associated with positive evaluation also. Images of Company A formed in Group 2 follow this proclivity slightly; profiles of Company A, Group 3 adhere to the pattern more dramatically, with one exception: the potency scales seem to indicate weaker sentiments rather than stronger ones. Even though this exception does occur, such an irregularity would not appear to distort the judgement that profiles of Company A are connotatively better than those of Company A'. In fact, it would seem quite logical for subjects to feel favorably inclined toward a company that was viewed as smaller, lighter, and more lenient.

The disparity between images formed in Group 3 of Company A as compared to the images of Group 2 presents another area for more detailed interpretation. While profiles of Company A, Group 3 indicated greater intensities of semantic feelings than those of Company A, Group 2, such profile separations did not occur between Groups 1 and 3 for Company A'. The only plausible reason which explains this phenomenon involves the nature of the message stimuli, compounded by

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[3]Charles E. Osgood, George J. Suci, and Percy H. Tannenbaum, The Measurement of Meaning, University of Illinois Press, Urbana, Illinois, 1957, p. 38.

the experimental design. In retrospect, it will be remembered that in Groups 1 and 2 subjects received message stimuli independently; that is, they either received good messages or bad ones, but not both good and bad units, successively. In Group 3, subjects were administered good and bad message units, simultaneously. Results of the message interaction in Group 3 seem to create multiplied judgements relative to what is considered "good," but not to what is rated "bad."

Finally, the question of image transformation over time must be considered carefully. It would have been quite simple to explain the image discrepancies which occurred between the test intervals in terms of an "incubation effect," had certain inconsistencies not negated such an interpretation. If the profiles of Company A and Company A' had demonstrated more meaningful ratings over time, such an explanation would be quite appropriate. However, results of the experiment do not justify this conclusion.

D statistics computed for the various profiles between time periods indicated that the images did change over time. If this had not been the case, expected D scores for the time relationships would have been zero (D=0.00). Close inspection of the distance separations that did result reveals that larger distances occurred between concepts in Groups 1 and 2, the independent groups, than Group 3, the combination group. When profile directions are considered, both the profiles in Group 1 and 2 indicated movements in a less meaningful direction, while profiles in Group 3 demonstrated inconsistent movements by comparison. Such inconsistency was exemplified by the fact

that approximately half of the scales changed in opposite directions in each set of profiles in Group 3. Too, D value magnitudes would seem to support the idea that greater degrees of change occurred relative to Company A', Group 3 (D=.92) than Company A, Group 3 (D=.42).

Three reasons stand paramount to justify these change patterns. The first of these concerns the "test effect." Because of the rather lengthy duration of the experimental period, the test effect could account for some of the less meaningful judgements which occurred over time. Such an explanation would seem especially correct for the changes in Groups 1 and 2, since the magnitude of their D scores was greater than those in Group 3. In addition, it seems equally logical to assume that some of the "test effect" was checked in Group 3 due to the interaction of good and bad message stimuli. Thirdly, the less meaningful movements of most of the profiles could have been a function of the message types. Between Tests 1 and 2 more of the message situations were negative and persuasive, and the character of these situations could have created less meaningful judgements. Any or all of the reasons could explain why the image patterns changed over time. It would be difficult, however, to clearly assess which one was the more important.

C. Reliability of the Semantic Data

Although profile analyses and corresponding D values have suggested that the four hypotheses confronting this research are correct, none of the analytical procedures used thus far have revealed the

statistical significance of the data. For the purposes of this research, the "t" test was employed to test the data for statistical correctness. Seeking the goal of statistical reliability, a succinct inquiry into the procedure used in the "t" test, a specific explanation of the judgement standard utilized to determine the significance of the semantic profiles, and an inspection of certain significant relationships between concepts in the study will finalize the interpretation and analysis of the experimental results.

1. T Scores as a Measure of Statistical Reliability and the Judgement Standard

The "t" test (or Student's Distribution) is a widely accepted statistical technique used to verify the statistical significance between mean values when samples are small and the σ (standard deviation of a population) is not known.[4] Its adoption in this research was especially noteworthy, since it was important to know whether differences in mean scores between two sets of semantic continua occurred by chance or were attributable to some factor other than random, contingent variation.

Procedurally, a null hypothesis was stated that there would be no difference between the mean values on any two semantic scales, so that the population mean of one group (μ_1) would be equal to that of another (μ_2). To test this hypothesis ($\mu_1=\mu_2$, or $\mu_1-\mu_2=0$), "t" values

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[4]See Samuel B. Richmond, Statistical Analysis, 2nd ed., The Ronald Press Company, New York, 1964, pp. 184-195.

for various combinations of scale means between profiles had to be computed.[5] When all of the "t" statistics were calculated, the values were compared to critical "t" scores associated with predetermined levels of significance. In this research, critical "t's" were computed for both the $\alpha = .05$ and $\alpha = .01$ levels of significance and "t" scores were compared to both such levels for statistical reliability. Lastly, judgement standards were established to determine the number of scales in the semantic tests which would be needed to infer that a significant difference existed between two profiles.

Formally stated, the judgement standards which guided the belief that statistical differences prevailed between two concepts were the following:

> If one of the fifteen scales was significant at the $\alpha = .05$ level, (the individual "t" value was greater than the critical "t" at $\alpha = .05$), the entire profile was considered significant.
>
> If one of the fifteen scales was significant at the $\alpha = .01$ level, (the individual "t" value was greater than the critical "t" at $\alpha = .01$), the entire profile was considered significant.

Reasons to support these criteria are necessary, since the logic underlying them may not be evident.

At $\alpha = .05$, most researchers would expect 5 out of 100 scales to show "t" scores higher than the critical "t" on the basis of random variation. At $\alpha = .01$, 1 out of 100 scales would show significance for

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[5] "t" values were determined according to the "paired samples" method given in Croxtan and Cowden, Practical Business Statistics, pp. 355-357.

the same reason. If a greater number of scales fall above the critical points, it can be assumed that some factor other than chance caused such occurrences.

In this research, only 15 semantic scales were used to rate the various concepts; thus, the minimum number of scales to indicate statistical difference out of the base 15 had to be established. If 1 scale out of 15 showed significance, such a development would constitute 6.66 percent of the whole. On the base of 100, this percentage would mean that approximately 7 scales would have greater "t" scores than the critical value, a number greater than that which is expected to occur due to randomness at $\alpha=.05$. Logically, at $\alpha=.01$, a smaller number of scales would be needed to denote significance; however, it would be meaningless and impossible to divide any one scale into fractional units. Thus, if 1 scale out of 15 demonstrates statistical difference at either the $\alpha=.05$ or $\alpha=.01$ levels, the null hypothesis is discredited ($\mu_1 \neq \mu_2$) and the two profiles become significant in their entirety.

Additionally, the criteria for statistical significance are quite consistent with Osgood's thinking on the subject. He states that if at least one dimension in a semantic test is significant, then the entire test is significant.[6] Although Osgood's criteria relates to dimensions of the semantic differential, it would appear that if one significant scale validates the significance of the entire test,

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[6]Osgood, et al., op. cit., p. 100.

even greater confidence can be expected should the significance standard be applied on a dimension basis. For example, if 1 of the 8 evaluative scales indicated significance, this would be 12.5 percent, or more than double the number expected at $\alpha = .05$.

2. Analysis of Significant Differences

The number of scales in each semantic test with "t" values outside the critical "t" scores for certain concept relationships are shown in Table VII. When the judgement standard is applied to this tabulation, all of the relationships, except one, rank statistically different. Only the images of Company A formed in Group 3 in Test 1 and Test 2 do not indicate significance at $\alpha = .01$; however, all of the profiles were significantly different at $\alpha = .05$. Thus, it seems that the concepts structured in the experiment did not occur by chance.

Tests of significance were not applied to all concept relationships in the study. Because a direct relationship was found to exist between D scores and the level of significant difference,[7] only those concepts presented in Table VII were tested for significance. The fact that D statistics and significance levels parallel one another can best be explained through example. The smallest D score found throughout the experiment was .48, the linear separation of Company A, Group 3 in Test 1 and Company A, Group 3 in Test 2. Tests of significance for these two concepts indicated that the images were

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[7]This association appears logical since mean differences were used in both statistical procedures.

TABLE VII

NUMBER OF ADJECTIVE SCALES FALLING OUTSIDE CRITICAL "T" VALUES CORRESPONDING TO VARIOUS CONCEPT RELATIONSHIPS WITHIN THE EXPERIMENT

Relationship	Number of Scales Falling Outside of Critical "t" Value at α=.05	Number of Scales Falling Outside of Critical "t" Value at α=.01
Group 1, Test 1-Group 1, Test 2	10	9
Group 2, Test 1-Group 2, Test 2	7	6
Group 3, Test 1 (A) - Group 3, Test 1 (A')	15	15
Group 3, Test 1 (A) - Group 3, Test 2 (A)	1	0
Group 3, Test 1 (A) - Group 3, Test 2 (A')	15	15
Group 3, Test 1 (A') - Group 3, Test 2 (A')	3	1
Group 3, Test 2 (A) - Group 3, Test 2 (A')	15	15

Source: Tables X - XVII, Appendix G

significant at α=.05, but not at α=.01. Moreover, the highest D statistic reported in the study (D=10.55) concerned the spatial distance between Company A', Group 3 and Company A, Group 3 in Test 2. For this relationship, all of the scales proved statistically different at both α=.05 and α=.01. Thus, it would be logical to assume that all of the concepts were significant at α=.05. More intuitively, the great majority of the images were probably significantly different at α=.01, since the third lowest D value (.92) produced statistically valid images at both α=.05 and α=.01. These reasons would seem to justify the significance of all concepts, even though tests of significance were not conducted for all concept combinations.

CHAPTER IV

SUMMARY AND CONCLUSIONS

The purpose of this experimental research was to examine the interrelationship of communicatee reactions and variations in written message design. It was thought that such an approach to the study of the communication process would establish the validity of certain principles of business writing. With the idea of certifying selected principles of business writing leading the way, four hypotheses were stated to be tested.

> Hypothesis One: That written communications create images in the minds of receivers to whom messages have been communicated. Specifically, business letters, as a form of written communication, produce such images.
>
> Hypothesis Two: That if accepted principles of business writing are utilized in a given message, favorable images can be created.
>
> Hypothesis Three: That if generally accepted principles of written business communication are not followed, different (less favorable) images result.
>
> Hypothesis Four: That images formed through written messages will change over time as a result of repeated message stimuli.

A glance at related studies in the communications area revealed that some principles had been investigated incognito in disciplines other than business communication; however, the combined effect of the principles of business letter writing had not been specifically examined. Thus, proof or disproof of the four hypotheses confronting this research seemed to offer significant enhancement to the business

communication discipline, since the structure of the area appeared to lack empirical support.

To investigate specifically the various effects of message structure on communicatee responses, an experiment was designed. Three groups of subjects at Louisiana State University were selected and two different series of letter messages were designed to be read and evaluated by each of them in varying fashion. One experimental group read only messages structured with accepted principles of business writing; a second group received messages structured without these principles; and a third test group read both messages designed with and without accepted principles of business writing for each letter situation throughout the experimental period.

After the fifth and tenth message exposures, semantic differentials were administered to measure impressions that the message stimuli had created. The images formed in each group were then scrutinized carefully within the framework set forth by the four hypotheses; intergroup and intragroup comparisons were made. The conclusions evolving from that analysis merit succinct reiteration.

A. Hypothesis One

The purpose of Hypothesis One was to determine whether communicatee images emanated from written business messages. If this hypothesis was not true, the validity of the entire area of business communications seemed questionable, since the rudiments of the field assume that behavioral responses and writing efforts are highly associated.

An investigation of the group profiles revealed that semantic responses plotted on varying extremes of the semantic scales used in the semantic differentials and in diversified dimension patterns. This finding generated great support for Hypothesis One. Message stimuli did seem to create communicatee images, and the concepts formed appeared to be directly connected to the type of message received. The implication of this conclusion, however, overlaps with Hypothesis Two.

B. Hypothesis Two

The intent of Hypothesis Two was to extend the scope of Hypothesis One by determining whether messages structured with accepted principles of business writing elicited favorable communicatee connotations. After analyzing the semantic profiles of those groups which received good messages (Groups 2 and 3), it was found that propitious conceptions did result from messages designed with principles of business writing. However, a discrepancy existed between the impressions formed in the two groups. Closer examination of the profile differences disclosed that a "multiplier effect" seemed to occur when subjects received both good and bad messages simultaneously. This multiplier action was evidenced by a greater dispersion of favorable connotations in Group 3. However, such effects were noted only in the formation of favorable images; concept formation in those groups which received bad messages was somewhat different.

C. Hypothesis Three

While the purpose of Hypothesis Two was to test the effects of principles of business writing, Hypothesis Three attempted to measure mental impressions formed when message stimuli were not structured with such guides. When messages were not designed with principles, subjects did construct negative connotations. Yet, the images created in the two groups which received bad messages (Groups 1 and 3) did not show as great a discrepancy between one another when compared to the image profiles resulting from good messages. Even though extreme discrepancies did not exist relative to these negative impressions, the most unfavorable connotation occurred in Group 3--the test group which read both good and bad messages systematically throughout the experiment. All sets of negative profiles, however, were juxtaposed to a greater extent than those formed as a result of good message stimuli.

D. Hypothesis Four

The final hypothesis was formulated to determine whether communicatee perceptions of a concept constructed in a first impression period would change over time. This hypothesis proved true; however, certain profile inconsistencies were detected when group impressions were compared. While images formed in the independent test groups (Groups 1 and 2) became less meaningful over time, the semantic responses in the group evaluating both good and bad messages showed more meaningful judgements on some scales and less meaningful evaluations

on others. Reasons given for this inconsistent movement were three: (1) the test effect, (2) the nature of the experimental design, and (3) the character of the message situations. Whereas the test effect and the design of the experiment could account for some of the profile contradictions, the nature of the message stimuli warrants additional comment.

As discussed in detail in Chapter Two, the letter messages from situation to situation were arranged logically in the experiment; that is, the message sequence was ordered in a series normally expected to occur in the conduct of business affairs. When these letter messages were classified by message type, it was found that three of the first five messages were positive or neutral news, while only two were persuasive. In the next five messages, those given between Tests 1 and 2, two situations were neutral or good news types, two were persuasive, and one was negative. Hence, more negative and persuasive messages were administered before Test 2 than before Test 1. And such messages by their inherent character create difficulty for maintaining positive emphasis and enhancing goodwill. Perhaps some of these inherent qualities were impossible to overcome through writing efforts. Thus, it could be that the nature of the message stimuli caused more meaningless judgements in Test 2 than Test 1. Too, message interaction in Group 3 could have partially restrained the inherent negative effects of the latter situations.

E. Implications for Further Research

Admittedly, the experiment reported in the preceding pages is limited. Nevertheless, the results of the research do show strong promise for the validity of some of the principles of business writing. Most of the principles tested in this experiment were previously justified only on the basis of logic. Through the use of the semantic differential, which allows an investigation of quite complex mental processes, it can now be stated more emphatically that communicatees form more favorable images when they receive messages structured with principles of business writing.

In addition to this basic conclusion and on a higher level of abstraction, more questions than answers seem to arise concerning the area of communicatee reactions. For example, would the same results have occurred if the duration of the experiment would have been longer or shorter? Would the use of subjects other than student respondents have produced similar results? Could the semantic differential be used to measure the effects of specific principles or individual letter types? And could the semantic differential technique be profitably employed in research areas of report writing?

Such questions as these signal the continuing need for research in the business communication discipline. It is hoped that this pioneer experiment will encourage other researchers to provide this needed investigation of written communications in business.

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APPENDIX A

INSTRUCTIONS AND FORMAT OF THE SEMANTIC DIFFERENTIALS USED IN THE EXPERIMENT

Instructions

The purpose of this test is to measure the meanings of certain facets of the study in which you have been participating. On the following page you will find a certain area of the study you are to judge and beneath it a set of descriptive scales. You are to rate the concept on each of these scales in order.

1. If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place an "X" as follows:

	Very	Closely	Slightly	Neutral	Slightly	Closely	Very	
FAIR	X							UNFAIR

or

FAIR							X	UNFAIR

2. If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place an "X" as follows:

	Very	Closely	Slightly	Neutral	Slightly	Closely	Very	
STRONG		X						WEAK

or

STRONG						X		WEAK

3. If the concept seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

	Very	Closely	Slightly	Neutral	Slightly	Closely	Very	
ACTIVE			X					PASSIVE

or

ACTIVE					X			PASSIVE

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the area you're judging. (Note that each column is labeled for your convenience.)

4. If you consider the concept to be neutral on the scale, or if the scale is completely irrelevant to the concept, then you should place your check mark in the middle space.

	Very	Close-ly	Slight-ly	Neu-tral	Slight-ly	Close-ly	Very	
SAFE	_____	_____	_____	X	_____	_____	_____	DANGEROUS

IMPORTANT

1. Place your X's in the middle of the spaces, not on the boundaries:

	This			Not This		
_____	X	_____	_____	X	_____	_____

2. Be sure you check every scale--do not omit any.

3. Never put more than one "X" on a single scale.

Please do not look back and forth through the items or try to remember how you checked similar items earlier in the test. Make each item a separate and independent judgement and work at fairly high speed through the test. You do not have to worry or puzzle over individual items. Your first impressions are the ones that are important. On the other hand, please mark your judgements carefully so that the results will give your true impressions.

In the space below, you will find the facet of the study you are to judge:

COMPANY A

With Company A in mind, please fill out the evaluation scale below.

	Very	Closely	Slightly	Neutral	Slightly	Closely	Very	
BAD								GOOD
CRUEL								KIND
UNGRATEFUL								GRATEFUL
SUCCESSFUL								UNSUCCESSFUL
MEANINGFUL								MEANINGLESS
PROGRESSIVE								REGRESSIVE
NEGATIVE								POSITIVE
DISREPUTABLE								REPUTABLE
FOOLISH								WISE
HEALTHY								SICK
SMALL								LARGE
PLEASURABLE								PAINFUL
PESSIMISTIC								OPTIMISTIC
SEVERE								LENIENT
HEAVY								LIGHT
SERIOUS								HUMOROUS
PASSIVE								ACTIVE
FAST								SLOW
ROUNDED								ANGULAR
NEW								OLD
TASTELESS								SAVORY

Instructions

The purpose of this test is to measure the meanings of certain facets of the study in which you have been participating. On the following page you will find a certain area of the study you are to judge and beneath it a set of descriptive scales. You are to rate the concept on each of these scales in order.

1. If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place an "X" as follows:

	Very	Closely	Slightly	Neutral	Slightly	Closely	Very	
FAIR	X							UNFAIR

or

	Very	Closely	Slightly	Neutral	Slightly	Closely	Very	
FAIR							X	UNFAIR

2. If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place an "X" as follows:

	Very	Closely	Slightly	Neutral	Slightly	Closely	Very	
STRONG		X						WEAK

or

	Very	Closely	Slightly	Neutral	Slightly	Closely	Very	
STRONG						X		WEAK

3. If the concept seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

	Very	Closely	Slightly	Neutral	Slightly	Closely	Very	
ACTIVE			X					PASSIVE

or

	Very	Closely	Slightly	Neutral	Slightly	Closely	Very	
ACTIVE					X			PASSIVE

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the area you're judging. (Note that each column is labeled for your convenience.)

4. If you consider the concept to be neutral on the scale, or if the scale is completely irrelevant to the concept, then you should place your check mark in the middle space.

	Very	Close-ly	Slight-ly	Neu-tral	Slight-ly	Close-ly	Very	
SAFE	_____	_____	_____	X	_____	_____	_____	DANGEROUS

IMPORTANT

1. Place your X's in the middle of the spaces, not on the boundaries:

	This			Not This		
_____	X	_____	_____	X	_____	_____

2. Be sure you check every scale--do not omit any.

3. Never put more than one "X" on a single scale.

Please do not look back and forth through the items or try to remember how you checked similar items earlier in the test. Make each item a separate and independent judgement and work at fairly high speed through the test. You do not have to worry or puzzle over individual items. Your first impressions are the ones that are important. On the other hand, please mark your judgements carefully so that the results will give your true impressions.

In the space below, you will find the facet of the study you are to judge:

COMPANY A'

With Company A' in mind, please fill out the evaluation scale below.

	Very	Close-ly	Slight-ly	Neu-tral	Slight-ly	Close-ly	Very	
BAD	_____	_____	_____	_____	_____	_____	_____	GOOD
CRUEL	_____	_____	_____	_____	_____	_____	_____	KIND
UNGRATEFUL	_____	_____	_____	_____	_____	_____	_____	GRATEFUL
SUCCESSFUL	_____	_____	_____	_____	_____	_____	_____	UNSUCCESSFUL
MEANINGFUL	_____	_____	_____	_____	_____	_____	_____	MEANINGLESS
PROGRESSIVE	_____	_____	_____	_____	_____	_____	_____	REGRESSIVE
NEGATIVE	_____	_____	_____	_____	_____	_____	_____	POSITIVE
DISREPUTABLE	_____	_____	_____	_____	_____	_____	_____	REPUTABLE
FOOLISH	_____	_____	_____	_____	_____	_____	_____	WISE
HEALTHY	_____	_____	_____	_____	_____	_____	_____	SICK
SMALL	_____	_____	_____	_____	_____	_____	_____	LARGE
PLEASURABLE	_____	_____	_____	_____	_____	_____	_____	PAINFUL
PESSIMISTIC	_____	_____	_____	_____	_____	_____	_____	OPTIMISTIC
SEVERE	_____	_____	_____	_____	_____	_____	_____	LENIENT
HEAVY	_____	_____	_____	_____	_____	_____	_____	LIGHT
SERIOUS	_____	_____	_____	_____	_____	_____	_____	HUMOROUS
PASSIVE	_____	_____	_____	_____	_____	_____	_____	ACTIVE
FAST	_____	_____	_____	_____	_____	_____	_____	SLOW
ROUNDED	_____	_____	_____	_____	_____	_____	_____	ANGULAR
NEW	_____	_____	_____	_____	_____	_____	_____	OLD
TASTELESS	_____	_____	_____	_____	_____	_____	_____	SAVORY

APPENDIX B

SITUATION DESCRIPTIONS AND MESSAGE PRESENTATIONS USED IN THE EXPERIMENT

(In the experiment, students received each day a situation description which they read first and a letter message which they read last.)

Situation 1 (Company A)

Assume you applied for a 20 year payment, $10,000 life insurance policy with the A Company. Ten days ago you filled out several forms to complete your application for coverage. Today, you receive this letter from the company.

Dear Policyholder:

In the next several days, you will receive your first $10,000 life insurance policy with the A Insurance Company. With it come our guarantee of protection and security and wholehearted thanks for the confidence you've placed in us. Everyone here at A Company welcomes every opportunity to serve you and to provide whatever assistance we can when you have insurance needs.

As you may know, life insurance creates a financial estate by an initial premium payment. This security should free your future from undue concern over financial protection. Giving you this protection and serving the general public are certainly our main goals here at A Company.

The A Company is a stock life firm chartered by the state of Louisiana and dedicated to serving Louisianians, as well as hundreds of policyholders in surrounding areas. You can be sure that our management personnel, technical staff, and company representatives in the field will guarantee that you'll receive the maximum in life insurance protection and service throughout your future as an A Company policyholder.

Besides the financial shelter your policy provides, you'll receive other life insurance features such as cash loans and surrender values. When you get your policy contract, read these important sections--they're added proof that Company A supplies maximum insurance coverages.

Protecting your future, insuring your protection, guaranteeing our pledges--these are our promises to you for "life." We'll work diligently to make your future safe in the best insurable way.

Sincerely,

George B. Williams

Situation 1 (Company A')

Assume you applied for a 20 year payment, $10,000 life insurance policy with the A' Company. Ten days ago, you filled out several forms to complete your application for coverage. Today, you receive this letter from the company.

Dear Policyholder:

Please be advised that you now have a policy with our company in the amount of $10,000. We intend to keep our part of the bargain you have made with us; so, will you do your part, too?

Make sure you read your policy thoroughly. We find that this helps reduce misunderstandings later on. Also, note the face amount of your policy and when payments are due.

The A' Company is a stock life insurance company chartered by the state of Louisiana. We have many policyholders and a large management and technical staff. We're a reputable firm; so you don't have to worry about us standing behind our commitments.

If there is anything you need to know, please don't hesitate to ask.

Sincerely,

George B. Williams

Situation 2 (Company A)

Assume that you're wondering about how the proceeds of your insurance policy will be paid to your beneficiary. Certainly, you want to know if the company will take the proper steps to make sure that the right person receives the benefits of your policy should anything happen to you. So, you wrote a letter to the company asking them about the procedure they used to pay off insurance policies. Here is the reply you received.

Dear Policyholder:

Subject: Procedure for Payment of Insurance Proceeds

Your insurance policy is legally a part of your financial estate and we will make certain that the designated beneficiary receives the stipulated amount of your contract.

Should anything happen to you, the court of your political district will appoint an executor for your estate. Then, we'll pay the money to the executor of your Will, and this person will make sure the money is paid to the correct beneficiary.

Unless you prefer otherwise, we'll pay a lump sum to the executor of your Will; however, if you would like another payment option, we can arrange it if you'll just tell us.

I certainly hope these answers help you. At Company A, you know, it's always a rewarding opportunity to assist you.

Sincerely

George B. Williams

Situation 2 (Company A')

Assume that you're wondering about how the proceeds of your insurance policy will be paid to your beneficiary. Certainly, you want to know if the company will take the proper steps to make sure that the right person receives the benefits of your policy should anything happen to you. So, you wrote a letter to the company asking them about the procedure they used to pay off insurance policies. Here is the reply you received.

Dear Policyholder:

Subject: Procedure for Payment of Insurance Proceeds

Acknowledging receipt of yours last week, please rest assured that you don't have to worry. As we told you before, Company A' is a reputable company and pays everything it owes.

When you die, the court will appoint someone to take care of your estate. When we receive notice of your death, we'll then pay the money to this person and he'll pay it to your beneficiary. If you'll read your policy, you'll notice that we will pay an absolute lump sum to the beneficiary.

Trusting this has in some way caused you not to worry with reference to our procedure in handling death claims, I beg to remain,

Sincerely,

George B. Williams

Situation 3 (Company A)

When you first took out your insurance policy with Company A, you named your parents as beneficiaries. Although you presently want to keep the policy contract as it is, you might want to change the beneficiary someday. Thus, you wrote to Company A asking them if it would be possible to change the designated beneficiaries on your policy at some future time. This letter answers your questions concerning a change in beneficiary.

Dear Policyholder:

Subject: Procedure for Changing Your Beneficiary

Yes, you may change your original beneficiary or also any future beneficiaries as long as your policy remains free from creditor assignment.

As you probably know, your insurance policy is a contract, and the assignment of new beneficiaries is a right that we here at Company A always respect. The only thing we request is that you follow our standard company procedure in amending your original contract.

Whenever you decide to substitute another beneficiary to your policy, just notify us in writing and send us your policy contract. We'll endorse the beneficiary and send the contract right back to you in a very few days.

Serving you is a genuine pleasure at Company A. You can be sure that we'll always stand ready to assist you whenever the occasion arises.

Sincerely,

James N. Johnson

Situation 3 (Company A')

When you first took out your insurance policy with A' Company, you named your parents as beneficiaries. Although you presently want to keep the policy contract as it is, you might want to change the beneficiary someday. Thus, you wrote to Company A' asking them if it would be possible to change the designated beneficiaries on your policy at some future time. This letter answers your questions concerning a change in beneficiary.

Dear Policyholder:

Subject: Procedure for Changing Your Beneficiary

As you should know, your insurance policy is a contract and we are bound by law to honor what you think is best concerning changes in beneficiaries. However, we can't change any beneficiary if you're in debt and have assigned your policy to some creditor.

We require that you make any and all requests in writing. Too, you are required to send us the policy so we can type in another name. This is our policy at Company A'.

Hoping that we have given you the information you wanted in regard to this matter, I remain

Sincerely,

James N. Johnson

Situation 4 (Company A)

Assume that the premium payments on your $10,000 life insurance policy are payable four times a year. Last quarter you mailed Company A a check as usual for $30.00--the regular quarterly payment on your policy. Company A mailed you a short note saying that they had not received your payment. You wrote back to Company A telling that you did mail a check for the correct amount due. For some reason the company has no record of your premium. (Perhaps someone along the line, either the mail service or the company, misplaced the check.) Shortly after you mailed your letter to the company, you receive this communication.

Dear Policyholder:

To give you insurance protection and to serve our policyholders well are certainly our primary goals here at Company A.

When we notice a missing premium payment, we're concerned, of course, because we know that your policy contract is a most important part of your financial estate. The most important thing to both of us is maintaining your full insurance coverage.

In this same spirit of mutual interest, would you please send us another check for your $30.00? By stopping payment on your previous check and sending us another one for the same amount, you'll continue to receive $10,000 of life insurance protection.

When you have insurance needs, we hope you'll look to Company A where "service" and "protection" for each policyholder are more than just words.

Sincerely,

John R. Johnson

Situation 4 (Company A')

Assume that the premium payments on your $10,000 life insurance policy are payable four times a year. Last quarter you mailed Company A' a check as usual for $30.00--the regular quarterly payment on your policy. Company A' mailed you a short note saying that they had not received your payment. You wrote back to Company A' telling that you did mail a check for the correct amount due. For some reason the company has no record of your premium. (Perhaps someone along the line, either the mail service or the company, misplaced the check.) Shortly after you mailed your letter to the company, you receive this communication.

Dear Policyholder:

We have no record of receiving your premium payment this quarter. If you want to retain your policy in force, you'll have to send us another check.

Regardless of why we didn't receive payment, you must realize that for us to continue insuring you we must have your payment.

Knowing that you will understand the seriousness of this matter and that you will send us your check immediately, I am,

Sincerely,

John R. Johnson

Situation 5 (Company A)

Assume that the premium payment on your life insurance policy is $120.00 per year, payable in four quarterly installments of $30.00. The first quarterly payment this year was due January 1, but you didn't have quite enough money on hand at that time for payment. You sent $20.00 to Company A along with a note explaining that you'd send the rest of the payment ($10.00) in a couple of months. Two weeks after you sent the partial payment and note, you received this letter.

Dear Policyholder:

When you think of a life insurance company, what words come to mind..."protection"?..."stability"?..."efficiencies"? You'll find all three of these qualities at Company A because they're essential for successful insurance operations.

To give you maximum insurance "protection" at the lowest possible rates, we try to maintain "stable" and "efficient" operations. You receive our present low rates now because we maintain minimum handling charges on each policy account. If our costs for handling these accounts rise, your cost for insurance protection, likewise, will rise. So, to keep your premium costs at their present low rate, will you please send us a check for $10 to complete payment for your quarterly premium? By so doing, you'll continue to receive the same low-cost rates on your $10,000 policy that you have in the past.

Whenever you think "insurance," we hope you'll look to Company A for the "protection," "stability," and "efficiency" that we know we can provide for you.

Sincerely,

Jack W. Williams

Situation 5 (Company A')

Assume that the premium payment on your life insurance policy is $120.00 per year, payable in four quarterly installments of $30.00. The first quarterly payment this year was due January 1, but you didn't have quite enough money on hand at that time for payment. You sent $20.00 to Company A' along with a note explaining that you'd send the rest of the payment ($10.00) in a couple of months. Two weeks after you sent the partial payment and note, you received this letter.

Dear Policyholder:

We need your full quarterly payment now. Our premium payments provide for only certain handling costs when we receive payments. When you send Company A' only part of the payment, this causes us to increase our costs.

So if you don't want to pay higher rates or a service charge in the future, send us the stipulated premium amount when it is due.

Sincerely,

Jack W. Williams

Situation 6 (Company A)

Assume that your second quarterly premium payment was due two weeks ago; however, you forgot about the payment and sent it in a week late. Somewhat concerned about the present status of your coverage, you wrote to Company A several days ago, asking them if your policy was still effective. Today's mail brings you this reply.

Dear Policyholder:

Subject: Present Status of Policy No. 156847

Yes, your insurance policy is still in force. I checked with the actuarial department this morning and they confirmed the active status of your coverage.

Your policy carries a 31-day grace clause which allows you to pay your premiums anytime up to 31 days after the premium is due. This feature of your policy protects you from automatic cancellation of coverage should we not receive your payments on the appropriate date.

I certainly appreciate this opportunity to be helpful. Will you please call on us again whenever we can assist you?

Sincerely,

James B. Jones

Situation 6 (Company A')

Assume that your second quarterly premium payment was due two weeks ago; however, you forgot about the payment and sent it in a week late. Somewhat concerned about the present status of your coverage, you wrote to Company A' several days ago, asking them if your policy was still effective. Today's mail brings you this reply.

Dear Policyholder:

Agreeable to your communication of several days ago, we have consulted our actuarial department to try to ascertain the status of subject policy.

Inasmuch as your payment on said policy was due here in our office two weeks ago and this classification carries a 31-day grace clause, we can't make you pay on time because your period of grace does not reach expiration until a period of not more than 31 days after the payment should have been paid on the agreed upon payment date.

Therefore, if you must delay payment at any future time in paying your premiums after the said payments are due, permission is hereby granted to delay remittance for a maximum of 31 days after due date of said payment. Trusting that this reply is in answer to yours previously and permitting us at Company A' to remind you of the importance of current payments in the conduct of business affairs, I am,

Sincerely,

James B. Jones

Situation 7 (Company A)

Assume that your third quarterly insurance premium for this year was due two weeks ago. Since you know that your policy has a 31-day grace clause, you're not worried too much about losing your coverage. However, today you receive this letter from Company A.

Dear Policyholder:

Today is tomorrow's yesterday; so forward-looking businesses, like forward-looking people, should plan their futures through the present, shouldn't they?

That's why we here at Company A think your insurance protection is so vitally important--because it protects you now (today!) and for many tomorrows, too. For some reason, we haven't received your premium payment this quarter. For you to maintain the active status of your coverage, will you send us your check for $30.00? You may use the enclosed addressed envelope for return mailing.

Your prompt check today will make your insurance protection not only a promise of the future, but a reality of the present.

Sincerely,

Samuel P. Baker

Situation 7 (Company A')

Assume that your third quarterly insurance premium for this year was due two weeks ago. Since you know that your policy has a 31-day grace clause, you're not worried too much about losing your coverage. However, today you receive this letter from Company A'.

Dear Policyholder:

Please be informed that our files tell us we have no record of your third payment for coverage this year. Regarding same, we beg to advise that even though you have a grace period of said 31 days, we must have payment before said time expires; otherwise your policy will lapse which is unduely unfortunate for you because you will have no protection.

Please find enclosed herewith an envelope for payment. Make your check for the correct amount and return at once. In connection therewith, also make future payments on time.

Awaiting your reply, I am,

Sincerely,

Samuel P. Baker

Situation 8 (Company A)

Assume that your insurance policy is now two years old. You need to borrow $100 for miscellaneous bills and you want to know if you can borrow this amount on your policy from Company A. In a brief note, you asked the company if it would be possible for you to borrow the money from them. Five days after you wrote your letter, you received the following reply.

Dear Policyholder:

The policy loan for $100, which you requested, is certainly available to you, and the forms you'll need to complete are enclosed.

All you need to do is fill out the Application for Policy Loan forms and sign them. Then we'll process the forms and in several days you'll receive our check.

Interest on the loan is 5 per cent per year, which I'm sure is the lowest you'll find from any commercial source. Should you want to continue the loan for more than one year, the same 5 per cent rate will apply to the balance of your payments.

To render service to our policyholders on any policy matter is an anticipated pleasure here at Company A. We're glad to have this chance to serve you once more.

Sincerely,

Donald S. Parker

Situation 8 (Company A')

Assume that your insurance policy is now two years old. You need to borrow $100 for miscellaneous bills and you want to know if you can borrow this amount on your policy from Company A'. In a brief note, you asked the company if it would be possible for you to borrow the money from them. Five days after you wrote your letter, you received the following reply.

Dear Policyholder:

Enclosed are some forms for you to fill out in detail before you can be considered for a policy loan. After we receive these from you, we'll go over them. It might take several days for us to do this, but after we complete the necessary procedure you'll probably get your loan.

One thing we want to point out is the interest charge involved. This is 5 per cent per year. If you fail to repay the loan in one year, another 5 per cent will be charged to your balance. You must realize that this charge is the cheapest you'll find anywhere.

Again, if you want the loan, fill out the forms and don't forget to sign them. Send them to us and allow us four or five days for the processing we have to do on them.

Sincerely,

Donald S. Parker

Situation 9 (Company A)

Assume that it is now three months until you will graduate from LSU. Your $10,000 life insurance policy has been in force with Company A three years. The following letter comes to you today.

Dear Policyholder:

Your child, lying blissfully asleep on its first night home from the hospital, suddenly awakes and gentle, tender cries reach out to you for help . . .

The fresh scent of painted wood perks your nostrils as your eyes stare aimlessly at soft, radiant colors throughout each room. You can still hear the echoing cadence of hammers erecting the frame of this, you long-awaited home . . .

The steady purr of your car's engine hum-m-ms in the background as you whisk away to your new job . . . that job, for which you've waited so long.

These are experiences . . . experiences of people . . . most probably some of your experiences within the next five to ten years.

And with the joy and excitement of your future comes added responsibility, and that's where Company A provides its finest hour. Think how wonderful you'd feel meeting each future year's challenges and knowing that you're guaranteed additional security and protection in whatever steps you take.

Yes, your future holds dreams and accomplishments that only your imagination limits. And you'll need protection along the way, from graduation to retirement. But how much protection will you really need? We don't know the answer--but we do know that Company A can provide most any life coverage that you may desire throughout your career.

When you glance through the enclosed brochures which show our many plans of life insurance, notice the rates for these coverages--see how really low-priced the rates are for additional insurance at your age right now. Won't you fill out the enclosed forms for added coverage and return them today? It's to your advantage to plan additional financial protection for your future now, while you're at your insurable best.

By taking this step, you'll increase the "protective" dimension in the security of your future.

Sincerely,

Richard B. Hall

Situation 9 (Company A')

Assume that it is now three months until you will graduate from LSU. Your $10,000 life insurance policy has been in force with Company A' three years. The following letter comes to you today.

Dear Policyholder:

If you think you'll need any additional insurance, please take heed of the enclosed brochures. These show our rates for additional coverages.

We don't know how much you'll need in the future, but I think we at Company A' can accommodate you in almost any insurance matter. Rates are lower at lower age levels, so you'd better think about buying now. Otherwise, you'll pay more later.

If you think you might be interested in us considering you, fill out the enclosed forms and return them at once. We'll consider them and let you know what we decide.

Sincerely,

Richard D. Hall

Situation 10 (Company A)

Assume that you requested an additional insurance policy for $5,000 as a result of the last letter from Company A. You completed the necessary application forms and had a medical examination. It has been three weeks since you mailed the information to the company. Today you receive this letter.

Dear Policyholder:

When we received your request for additional insurance coverage, our technical staff went immediately to work studying your request. You can be sure that Company A always gives prompt and detailed attention to servicing requests for insurance protection.

Granting an insurance contract, as you probably know, occurs only after careful and systematic consideration of the many reports on each applicant. These high underwriting standards protect our present policyholders as well as future ones.

Our staff gave special thought to your request because we always try to consider each case on its own merit. At this time, we can only continue to maintain your existing policy in force. Your present coverage will still, however, be the guardian of your safety and protection in years ahead.

Fair-minded treatment and individual attention are what you always receive at Company A. In this way, you're guaranteed quality service in all life insurance coverages.

Sincerely,

Robert J. Thomas

Situation 10 (Company A')

Assume that you requested an additional insurance policy for $5,000 as a result of the last letter from Company A'. You completed the necessary application forms and had a medical examination. It has been three weeks since you mailed the information to the company. Today you receive this letter.

Dear Policyholder:

Although we would like to, we cannot extend the additional $5,000 policy contract to you. Your medical exam showed that you are not in the best of physical condition; thus, we must reject your application.

Knowing that you will understand our decision on this matter, I am,

Sincerely,

Robert J. Thomas

APPENDIX C

MEMORANDUM SENT TO PROFESSORS OF THE EXPERIMENTAL GROUPS EXPLAINING PROCEDURE USED IN THE CONDUCT OF THE STUDY

To: Professor Gordon Paul
Professor Ridley Gros
Professor Ken Van Voorhis
Professor Dan Roundtree

From: John D. Pettit

Subject: Explanation of Procedure for Dissertation Study

I'm certainly grateful to each of you for helping me conduct this study. Hopefully, it will tell me some interesting things about communicatee reactions to written communications.

When you administer the study, would you please note the following points:

1. Before you pass out the first series of letters, please read to each class the "Instructions To All Students." I would appreciate it if you would not associate my name with the study in any way.

2. After you have read the "Instructions To All Students," pass out the first series of letters. Ask each class to read the material in the order it is given to them. They will receive 2 sheets stapled together. The first is a situation and the following one is a letter. Again, they are to read the situation first, then turn to the letter following the situation and read it last. Please allow the students 2 to 3 minutes to read the material. (I don't think it will take longer than this.)

When everyone has finished reading the material, please have them pass it in. (I'd appreciate it if they wouldn't mark on any of the material they read.) After you have collected the reading materials, have each class member write a one paragraph opinion of the company--not the product or the writer of the letter, but the company. Allow 1 to 2 minutes for this; then have the students put their names, course number, and section number on the papers and collect them. Would you please pass the printed material and student opinions on to me after each class?

While each student is reading the handouts, would you please check the roll on the special sheets I have made? I need to know which students have missed which exposures, so that I can make these up in future class meetings.

One more point--please exempt any student who has taken or is now taking the Mgt. 71-72 sequence. Also, if you have students who have participated in the study in a previous class, please exempt them in your class (ex.--a student meeting a class at 2:30 p.m. who has participated in another class at 9:30 a.m., previously, is exempted.) These students might study their lesson for the day while others are participating in the exercise.

Recapping the conduct of the study briefly, here is what you should do:

1. Read "Instructions" to class
2. Pass out materials
3. Check roll
4. Collect handouts
5. Have students write opinions
6. Collect papers
7. Pass handouts and papers to me.

Again, my wholehearted thanks go to each of you for your help. I hope the study provides some interesting conclusions.

APPENDIX D

INSTRUCTIONS READ TO EACH EXPERIMENTAL GROUP PRIOR TO THE ACTUAL CONDUCT OF THE EXPERIMENT

Instructions To All Students

You are asked to join in a business study for the next 12 successive class meetings. If you have had or are taking now the Mgt. 71-72 courses, you may be exempted from this study. Only those students who have not taken or are not now taking these courses (71 and 72) are being asked to participate. Also, if you have participated in a previous class, you do not have to participate in this one.

The study will take only a few minutes of each class meeting to complete. It will be conducted each day while your instructor checks the roll. Please try to be present each day so that the results of this study will be representative.

You will be asked to put your name on short papers that you will write each day; however, the results of this study are confidential and the responses you give will become summary tables in which no names will be given.

Your efforts and full cooperation in this study will advance the current thinking and development of many business ideas. Thank you very much.

APPENDIX E

VARIANCES FOR SEMANTIC SCALES

TABLE VIII

VARIANCES[1] FOR SEMANTIC SCALES BY GROUP AND TEST PERIOD

	Group 1		Group 2		Group 3			
					Company A		Company A'	
Semantic	Test 1	Test 2	Test 1	Test 2	Test 1	Test 2	Test 1	Test 2
1	107.95	123.68	142.48	148.48	115.39	90.00	154.99	145.55
2	63.52	61.92	134.48	122.48	103.52	87.95	124.19	112.48
3	92.67	76.35	200.99	175.12	124.99	106.99	172.00	120.75
4	182.00	168.19	125.79	138.72	190.67	148.99	179.39	143.15
5	140.32	109.39	157.39	144.59	119.68	101.28	153.55	140.19
6	155.95	184.67	166.67	128.67	84.00	93.79	168.75	121.95
7	135.12	128.35	152.75	136.75	129.15	113.12	180.19	126.19
8	177.79	160.67	169.52	158.19	136.59	122.35	189.39	120.75
9	128.19	132.67	188.67	178.08	98.67	119.12	182.67	106.75
10	117.55	125.79	152.67	103.95	138.00	112.19	118.67	90.75
11	244.75	168.37	194.99	175.95	121.92	90.67	204.67	127.12
12	91.92	94.19	107.55	72.00	160.75	112.99	127.68	108.00
13	206.67	180.75	207.95	193.55	200.59	170.35	194.19	119.79
14	89.39	78.59	154.48	105.95	126.08	96.67	114.75	93.55
15	79.12	63.79	57.15	69.68	68.67	48.32	123.39	155.15
16	156.99	211.92	182.59	168.08	144.99	130.67	257.15	198.67
17	182.35	132.99	124.67	136.08	98.19	86.72	192.75	162.67
18	172.75	189.52	158.67	134.00	89.79	102.67	108.67	113.92
19	146.75	121.68	128.08	93.39	113.15	93.39	137.52	94.00
20	219.95	168.75	204.19	164.72	128.32	103.12	154.75	131.28
21	126.67	124.19	144.35	125.39	147.79	85.79	146.67	124.75

[1]Variance scores were computed by the following formula:

$V=\sum(X-\bar{X})^2$, where

X= each subject response, and

$\bar{X}$= average scales response for a given test and group

APPENDIX F

MEAN VALUES FOR SEMANTIC SCALES

TABLE IX

MEAN VALUES FOR SEMANTIC SCALES BY GROUP AND TEST PERIOD

Semantic	Group 1		Group 2		Group 3			
					Company A		Company A'	
	Test 1	Test 2	Test 1	Test 2	Test 1	Test 2	Test 1	Test 2
1	2.31	2.76	4.44	4.44	6.15	6.00	2.35	2.37
2	2.92	3.12	4.44	4.56	5.92	6.03	2.75	2.44
3	2.33	2.43	4.65	4.28	5.99	5.99	2.40	2.17
6	4.97	4.73	3.33	3.33	2.00	2.05	4.83	5.03
7	2.72	2.91	4.51	4.49	5.77	5.72	2.75	2.75
9	2.59	2.67	4.47	4.16	5.93	5.72	2.53	2.51
10	4.71	4.39	3.33	3.69	2.80	2.75	4.73	4.83
11	3.49	3.73	4.35	4.03	5.12	5.07	3.13	3.28
12	4.88	4.75	3.71	3.80	2.51	2.35	5.24	5.40
14	2.19	2.55	3.44	3.69	4.84	5.13	2.17	2.29
15	3.28	3.39	3.77	3.76	4.33	4.32	3.15	3.23
17	4.09	4.01	5.33	4.84	5.41	5.52	4.17	3.53
18	3.51	4.08	3.07	3.60	3.05	2.93	3.73	4.12
19	4.83	4.76	3.84	3.85	2.77	2.81	4.92	5.00
21	2.33	2.59	3.57	3.81	5.05	5.05	2.33	2.49

APPENDIX G

T VALUES FOR VARIOUS TESTS IN THE EXPERIMENT

TABLE X

T VALUES BY ADJECTIVE PAIRS FOR SEMANTIC TESTS 1 AND 2 IN GROUP 1 COMPARED TO .05 AND .01 LEVELS OF SIGNIFICANCE AS A BASE FOR DETERMINING THE SIGNIFICANCE OF THE DIFFERENCES BETWEEN MEAN SEMANTIC RESPONSES

Semantic	T Value	T Value Higher Than Critical "t" Value at .05 Level of Significance[1]	T Value Higher Than Critical "t" Value at .01 Level of Significance[2]
1	-2.51	yes	no
2	-4.12	yes	yes
3	-4.05	yes	yes
6	.07	no	no
7	-1.06	no	no
9	-2.71	yes	yes
10	-1.13	no	no
11	-2.29	yes	no
12	-1.92	no	no
14	-4.85	yes	yes
15	-4.26	yes	yes
17	-3.67	yes	yes
18	-6.03	yes	yes
19	-5.81	yes	yes
21	-7.70	yes	yes

[1]Critical "t" value at .05 level of significance = ± 1.960

[2]Critical "t" value at .01 level of significance = ± 2.576

Degrees of Freedom: $n_1 + n_2 - 2 = 75 + 75 - 2 = 148$

TABLE XI

T VALUES BY ADJECTIVE PAIRS FOR SEMANTIC TESTS 1 AND 2 IN GROUP 2 COMPARED TO .05 AND .01 LEVELS OF SIGNIFICANCE AS A BASE FOR DETERMINING THE SIGNIFICANCE OF THE DIFFERENCES BETWEEN MEAN SEMANTIC RESPONSES

Semantic	T Value	T Value Higher Than Critical "t" Value at .05 Level of Significance[1]	T Value Higher Than Critical "t" Value at .01 Level of Significance[2]
1	0.00	no	no
2	-0.82	no	no
3	1.50	no	no
6	.94	no	no
7	1.20	no	no
9	3.86	yes	yes
10	1.72	no	no
11	3.39	yes	yes
12	3.53	yes	yes
14	2.91	yes	yes
15	4.39	yes	yes
17	3.28	yes	yes
18	-0.13	no	no
19	-0.21	no	no
21	-1.97	yes	no

[1] Critical "t" value at .05 level of significance = ± 1.960

[2] Critical "t" value at .01 level of significance = ± 2.576

Degrees of Freedom: $n_1 + n_2 - 2 = 75 + 75 - 2 = 148$

TABLE XII

T VALUES BY ADJECTIVE PAIRS FOR SEMANTIC TEST 1 RELATIVE TO COMPANY A AND COMPANY A' IN GROUP 3 COMPARED TO .05 AND .01 LEVELS OF SIGNIFICANCE AS A BASE FOR DETERMINING THE SIGNIFICANCE OF THE DIFFERENCES BETWEEN MEAN SEMANTIC RESPONSES

Semantic	T Value	T Value Higher Than Critical "t" Value at .05 Level of Significance[1]	T Value Higher Than Critical "t" Value at .01 Level of Significance[2]
1	13.40	yes	yes
2	13.54	yes	yes
3	12.23	yes	yes
6	4.40	yes	yes
7	13.20	yes	yes
9	11.46	yes	yes
10	7.15	yes	yes
11	9.95	yes	yes
12	6.58	yes	yes
14	10.27	yes	yes
15	9.20	yes	yes
17	9.18	yes	yes
18	8.23	yes	yes
19	7.45	yes	yes
21	9.96	yes	yes

[1]Critical "t" value at .05 level of significance = ± 1.960

[2]Critical "t" value at .01 level of significance = ± 2.576

Degrees of Freedom: $n_1 + n_2 - 2 = 75 + 75 - 2 = 148$

TABLE XIII

T VALUES BY ADJECTIVE PAIRS FOR SEMANTIC TESTS 1 AND 2 RELATIVE TO COMPANY A IN GROUP 3 COMPARED TO .05 AND .01 LEVELS OF SIGNIFICANCE AS A BASE FOR DETERMINING THE SIGNIFICANCE OF THE DIFFERENCES BETWEEN MEAN SEMANTIC RESPONSES

Semantic	T Value	T Value Higher Than Critical "t" Value at .05 Level of Significance[1]	T Value Higher Than Critical "t" Value at .01 Level of Significance[2]
1	0.93	no	no
2	0.28	no	no
3	0.24	no	no
6	-0.10	no	no
7	0.24	no	no
9	0.78	no	no
10	1.33	no	no
11	1.70	no	no
12	1.99	yes	no
14	1.26	no	no
15	1.82	no	no
17	-0.09	no	no
18	0.77	no	no
19	0.44	no	no
21	0.72	no	no

[1]Critical "t" value at .05 level of significance = ± 1.960

[2]Critical "t" value at .01 level of significance = ± 2.576

Degrees of Freedom: $n_1 + n_2 - 2 = 75 + 75 - 2 = 148$

TABLE XIV

T VALUES BY ADJECTIVE PAIRS FOR SEMANTIC TESTS 1 AND 2 RELATIVE TO COMPANY A (TEST 1) AND A' (TEST 2) COMPARED TO .05 AND .01 LEVELS OF SIGNIFICANCE AS A BASE FOR DETERMINING THE SIGNIFICANCE OF THE DIFFERENCES BETWEEN MEAN SEMANTIC RESPONSES

Semantic	T Value	T Value Higher Than Critical "t" Value at .05 Level of Significance[1]	T Value Higher Than Critical "t" Value at .01 Level of Significance[2]
1	15.78	yes	yes
2	14.86	yes	yes
3	12.67	yes	yes
6	4.37	yes	yes
7	13.96	yes	yes
9	11.64	yes	yes
10	7.11	yes	yes
11	9.93	yes	yes
12	6.48	yes	yes
14	10.28	yes	yes
15	9.17	yes	yes
17	9.55	yes	yes
18	8.04	yes	yes
19	7.41	yes	yes
21	9.95	yes	yes

[1]Critical "t" value at .05 level of significance = ± 1.960

[2]Critical "t" value at .01 level of significance = ± 2.576

Degrees of Freedom: $n_1 + n_2 - 2 = 75 + 75 - 2 = 148$

TABLE XV

T VALUES BY ADJECTIVE PAIRS FOR SEMANTIC TESTS 1 AND 2 RELATIVE TO COMPANY A' (TEST 1) AND A (TEST 2) COMPARED TO .05 AND .01 LEVELS OF SIGNIFICANCE AS A BASE FOR DETERMINING THE SIGNIFICANCE OF THE DIFFERENCES BETWEEN MEAN SEMANTIC RESPONSES

Semantic	T Value	T Value Higher Than Critical "t" Value at .05 Level of Significance[1]	T Value Higher Than Critical "t" Value at .01 Level of Significance[2]
1	-16.24	yes	yes
2	-14.39	yes	yes
3	-12.48	yes	yes
6	- 4.47	yes	yes
7	-13.52	yes	yes
9	-11.28	yes	yes
10	- 7.12	yes	yes
11	-10.01	yes	yes
12	- 6.49	yes	yes
14	-10.61	yes	yes
15	- 9.23	yes	yes
17	- 9.25	yes	yes
18	- 8.18	yes	yes
19	- 7.48	yes	yes
21	-10.01	yes	yes

[1]Critical "t" value at .05 level of significance = ± 1.960

[2]Critical "t" value at .01 level of significance = ± 2.576

Degrees of Freedom: $n_1 + n_2 - 2 = 75 + 75 - 2 = 148$

TABLE XVI

T VALUES BY ADJECTIVE PAIRS FOR SEMANTIC TESTS 1 AND 2 RELATIVE TO COMPANY A' IN GROUP 3 COMPARED TO .05 AND .01 LEVELS OF SIGNIFICANCE AS A BASE FOR DETERMINING THE SIGNIFICANCE OF THE DIFFERENCES BETWEEN MEAN SEMANTIC RESPONSES

Semantic	T Value	T Value Higher Than Critical "t" Value at .05 Level of Significance[1]	T Value Higher Than Critical "t" value of .01 Level of Significance[2]
1	-0.15	no	no
2	1.80	no	no
3	2.68	yes	yes
6	0.26	no	no
7	0.27	no	no
9	0.30	no	no
10	-0.23	no	no
11	-1.12	no	no
12	-1.91	no	no
14	-1.86	no	no
15	-2.21	yes	no
17	0.24	no	no
18	-2.10	yes	no
19	-2.22	yes	no
21	-3.78	yes	no

[1]Critical "t" value at .05 level of significance = $\pm$1.960

[2]Critical "t" value at .01 level of significance = $\pm$2.576

Degrees of Freedom: $n_1 + n_2 - 2 = 75 + 75 - 2 = 148$

TABLE XVII

T VALUES BY ADJECTIVE PAIRS FOR SEMANTIC TEST 2 RELATIVE TO COMPANY A AND A' IN GROUP 3 COMPARED TO .05 AND .01 LEVELS OF SIGNIFICANCE AS A BASE FOR DETERMINING THE SIGNIFICANCE OF THE DIFFERENCES BETWEEN MEAN SEMANTIC RESPONSES

Semantic	T Value	T Value Higher Than Critical "t" Value at .05 Level of Significance[1]	T Value Higher Than Critical "t" Value at .01 Level of Significance[2]
1	14.79	yes	yes
2	14.94	yes	yes
3	12.63	yes	yes
6	4.39	yes	yes
7	13.63	yes	yes
9	11.34	yes	yes
10	7.06	yes	yes
11	9.93	yes	yes
12	6.32	yes	yes
14	10.54	yes	yes
15	9.16	yes	yes
17	9.61	yes	yes
18	7.99	yes	yes
19	7.42	yes	yes
21	9.97	yes	yes

[1]Critical "t" value at .05 level of significance = ± 1.960

[2]Critical "t" value at .01 level of significance = ± 2.576

Degrees of Freedom: $n_1 + n_2 - 2 = 75 + 75 - 2 = 148$

VITA

John Douglas Pettit, Jr., was born on August 19, 1940, in Alice, Texas, the son of Vivian Iola and John Douglas Pettit. After graduating from William Adams High School, Alice, Texas, in 1958, he entered North Texas State University and received the degree of Bachelor of Business Administration in August, 1962.

In the fall of 1962, he began graduate work at North Texas State University and taught part-time in the School of Business Administration. In 1964, he received a Master of Business Administration degree in marketing. During the 1964-65 academic year, he joined the management faculty at Mississippi State University, teaching courses in business communications and economics.

He entered the Graduate School, Louisiana State University, in the fall of 1965, majoring in management, and finished course requirements for the Doctor of Philosophy degree in the summer of 1967. During the 1967-68 academic year, he served as Instructor of Management at Louisiana State University. He is now a candidate for the Doctor of Philosophy degree in management at Louisiana State University.

He is married to the former Suzanne McLeod, of Texarkana, Texas, and they have one daughter, Melanie Ann.

EXAMINATION AND THESIS REPORT

Candidate: John Douglas Pettit, Jr.

Major Field: Management

Title of Thesis: An Analysis of the Effects of Various Message Presentations on Communicatee Responses

Approved:

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Date of Examination: